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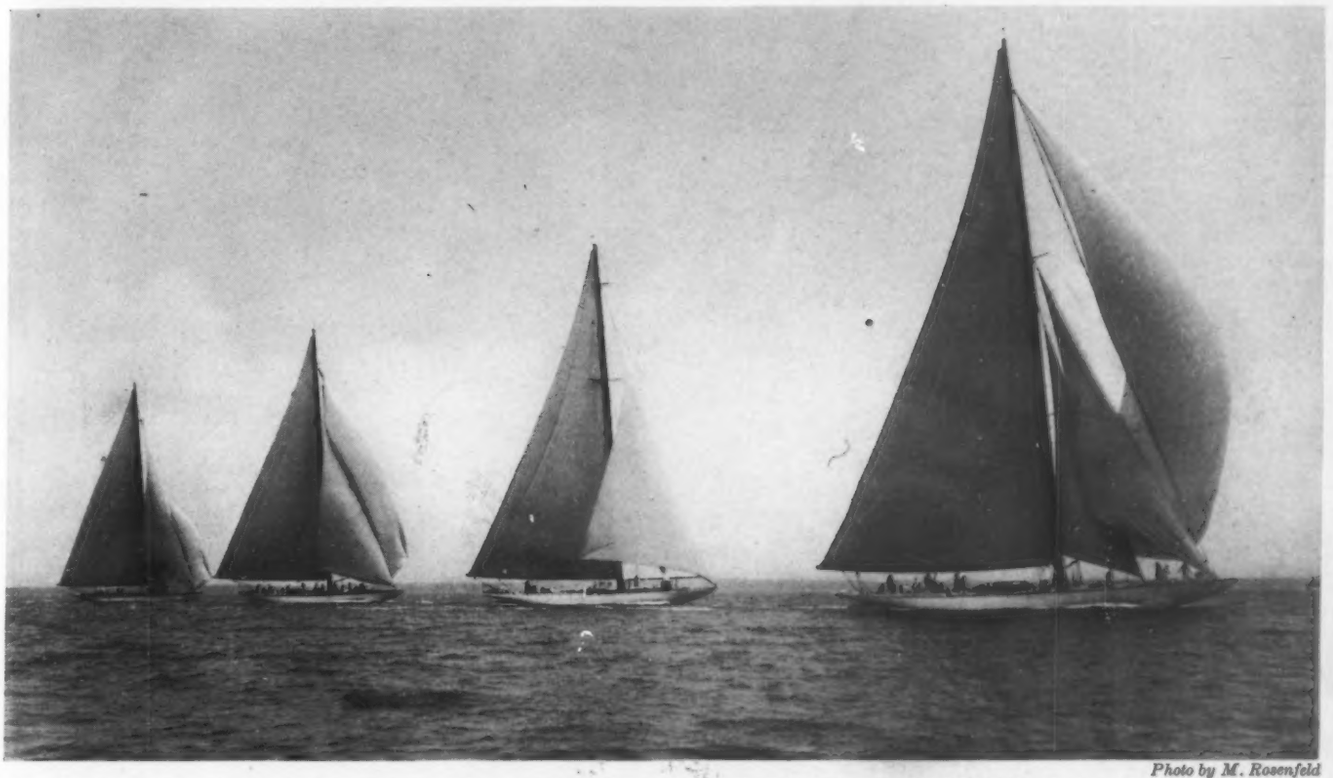


Photo by M. Rosenfeld

For the defence of the America's Cup. "Weetamoe" (at right) leading "Enterprise," "Yankee," and "Whirlwind." One of these yachts will be chosen to meet "Shamrock V"

The Defence of the America's Cup

Four Class J Cup Candidates Built for the Honor of Meeting "Shamrock V"

IN the seventy-three years since the Cup won by the schooner *America* in a race against a fleet of seventeen British yachts was turned over to the New York Yacht Club in 1857, to be forever held for international competition between yacht clubs of any foreign country, the matches for this ancient bit of silverware have become the world's greatest sporting event. To excel in the designing, building and sailing of ships has always appealed strongly to every nation with a seafaring background, and as a result of thirteen hard-fought contests, this trophy which bears the name of its first winner has come to stand for supremacy in speed under sail — the "blue ribbon of the sea."

For sixty years we have successfully defended the Cup, giving our best in brains and skill, and sparing nothing in the matter of expense. And so, when in May, 1929, a challenge was received from the Royal Ulster Yacht Club, on behalf of Sir Thomas Lipton and naming *Shamrock V* as the challenger, the New York Yacht Club promptly accepted, and named an America's Cup Committee to arrange the terms of the match and to provide for a suitable defence.

Arranging the terms with the challenging club for this match was quickly accomplished. In previous races for the Cup the challenger was required, under the deed of trust, to give certain dimensions of his yacht ten months in advance. Then, with these figures in hand, we would proceed to build the kind of defender that we thought would have the best chance to defeat a boat of that size. When the two boats were measured under the New York Yacht Club rules, they were sailed with time allowance based on their ratings, a procedure which was always more or less unsatisfactory, especially with the general public, who understood little of the technical questions involved and could not see why one boat should have to allow another time when both were of approximately the same size.

Since the match of 1920 the New York Yacht Club had adopted Lloyd's scantling rules, which are the same as those used for British yachts of equal size. These call

Photo by M. Rosenfeld

"Weetamoe," the Morgan-Nichols syndicate Cup aspirant. She was designed by Clinton H. Crane and is being sailed by George Nichols. At her best in light to moderate winds, she has been remarkably successful, especially in the early racing

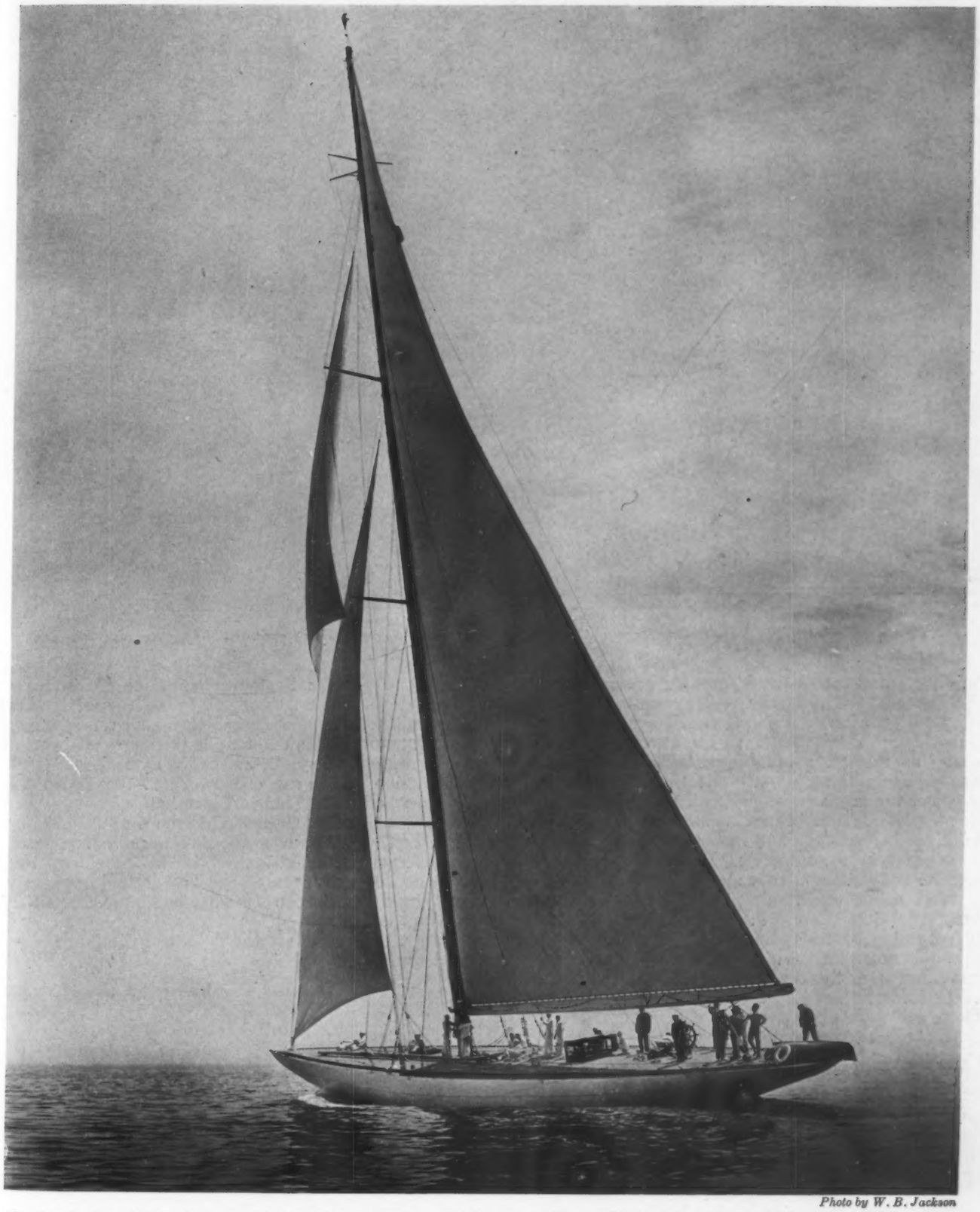


Photo by W. B. Jackson

New England yachtsmen have pinned their faith on "Yankee," designed by Frank C. Paine for a Boston syndicate headed by John S. Lawrence and Chandler Hovey. She is a powerful boat and at her best in a breeze. In a wind of over 16 knots' strength she is hard to beat. John S. Lawrence and Charles Francis Adams, Secretary of the Navy, have been sailing her

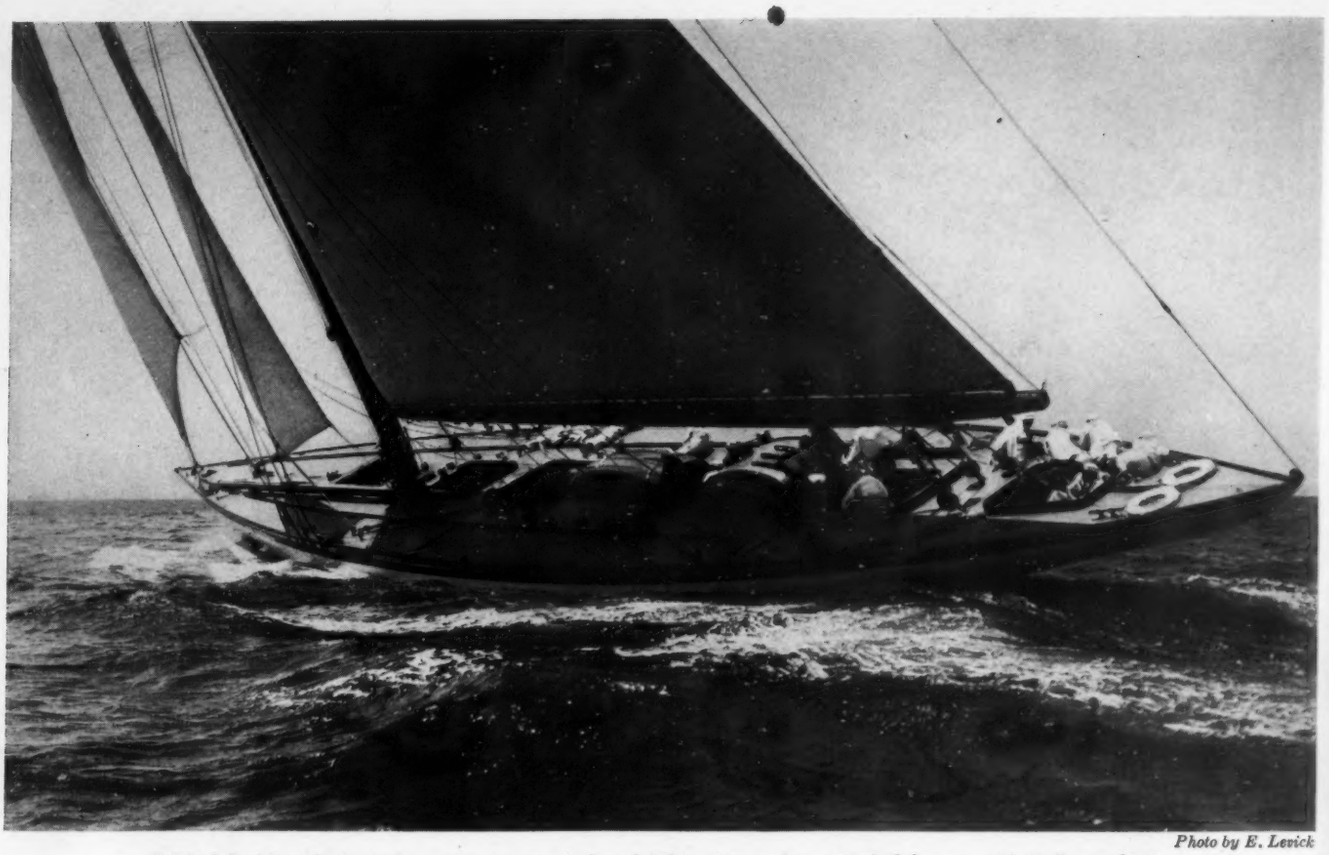


Photo by E. Levick

"Whirlwind," with sheets down, turning to windward. This picture shows the deck layout, with its five cockpits

for substantial construction, and their adoption meant that we could no longer sacrifice strength of hull for lightness. So, after receiving the challenge, the America's Cup Committee suggested to the Royal Ulster Yacht Club that instead of building to a specified water line length, as in the past, that it build the challenger to one of our regular rating classes. In the event that the Royal Ulster Yacht Club adopt this proposal, the New York Yacht Club agreed to meet the challenger with a boat rating in the same class, the match to be sailed boat for boat, without time allowance, as is the practice in races sailed under our rules in this country. The America's Cup Committee suggested either Class J, 76 feet rating, or Class K, 65 feet rating. It also requested that the races be sailed off Newport, Rhode Island, instead of over the time-honored Sandy Hook course, as the former offered a fairer course, free from interferences, and with a better chance of steady winds.

All of these suggestions the challenging club accepted, selecting the larger class of 76 feet rating to build to.

With the conditions agreed upon, the work of providing a boat for the defence went merrily forward, and soon no less than four Cup syndicates were formed to build yachts to Class J. As in the past, the flag officers of the New York Yacht Club were the first in the field with two syndicates, one headed by Vice-Commodore Winthrop W. Aldrich and Harold S. Vanderbilt, the other by Rear-Commodore Junius S. Morgan, Jr., and George Nichols. The former of these went to W. Starling Burgess for the design of a yacht, while the latter turned to Clinton H. Crane. The last named designer has not been practicing naval architecture for some time, though he had recently turned out many successful racing yachts in the smaller classes as an avocation.

Then several New England yachtsmen, mindful of what Boston had done for the defence of the Cup in the past, organized a syndicate headed by John S. Lawrence, Chandler Hovey and Frank C. Paine, the latter being the designer. No sooner had the plans for this syndicate been announced than a fourth boat was assured by the formation of a syndicate headed by Paul Hammond and Landon K. Thorne, of New York. This last-named group turned to L. Francis Herreshoff, of Marblehead, for the design. Mr. Herreshoff is the son of Nathanael Herreshoff, who had been the designer of every American defender since *Vigilant*, of 1893. The elder Herreshoff, now over 80 years of age, had retired from active work since the last race of 1920, when *Resolute* defended the Cup.

Here, at a glance, are the details of the four Class J sloops provided by these syndicates.

Racing Number	Yacht	Syndicate Manager	Afterguard Personnel	Designer	Builder
1	*Weetamoe*	Rear-Com. J. S. Morgan, Jr.	George Nichols, skipper, Junius S. Morgan, John Parkinson, R. N. Bavier, A. H. Eustis, C. H. Crane	Clinton H. Crane	Herreshoff Mfg. Co.
2	*Yankee*	John S. Lawrence	John S. Lawrence, skipper, Chandler Hovey, Frank C. Paine, Charles Francis Adams	Frank C. Paine	George Lawley & Son Corp.
3	*Whirlwind*	Paul Hammond	Paul Hammond, Landon K. Thorne	L. Francis Herreshoff	George Lawley & Son Corp.
4	*Enterprise*	Vice-Com. W. W. Aldrich	Harold S. Vanderbilt, skipper, C. Sherman Hoyt, C. F. Havemeyer, W. W. Aldrich, W. Starling Burgess	W. Starling Burgess	Herreshoff Mfg. Co.

The details of these four yachts, and an analysis of their designs, will be found in another article in this issue.

The task of picking a defender from this quartette

(*Continued on page 108*)

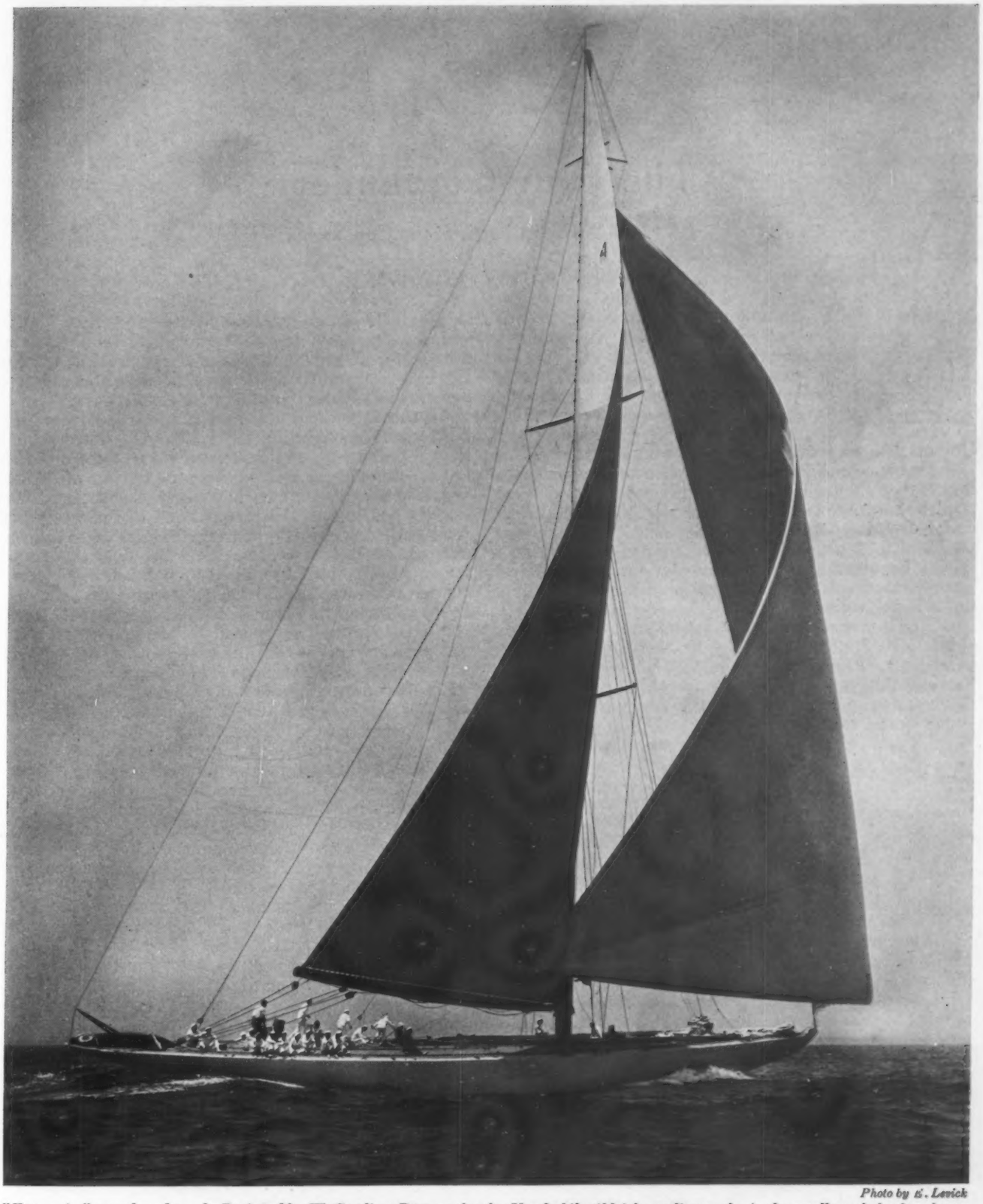
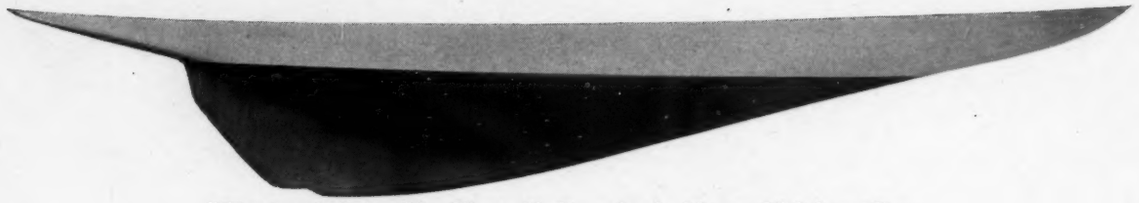


Photo by E. Levick

"Enterprise" on a broad reach. Designed by W. Starling Burgess for the Vanderbilt-Aldrich syndicate, she is the smallest of the four boats built to defend the Cup. Like "Weetamoe," she is considered a light weather boat and is at her best turning to windward. Harold S. Vanderbilt is sailing her



"Weetamoe," designed by Clinton H. Crane for the Morgan-Nichols syndicate

The Four Contenders

A Naval Architect Looks at the Cup Yachts

By CHESTER A. NEDWIDEK

FOR the honor of defending the famous America's Cup four big yachts have been built, one of which will be selected to sail against Sir Thomas Lipton's challenger, *Shamrock V.* All of the American boats, as well as the challenger, have been designed under the Universal Rule of rating and to meet the requirements of Lloyd's for scantlings and details of construction. This means that they will race on even terms and that there need be no more loose talk about the "sturdy British craft" or "flimsy American racing shells." In dimensions and hull form they all vary, of course, each designer having his own ideas as to what is the best and fastest boat that can be turned out under the conditions laid down in the rules.

Of the American yachts, *Weetamoe* was designed by Clinton H. Crane, *Yankee* by Frank C. Paine, *Whirlwind* by L. Francis Herreshoff, and *Enterprise* by W. Starling Burgess.

The principal dimensions of the contenders and challenger are as follows:

	Weetamoe	*Yankee*	*Whirlwind*	*Enterprise*	*Shamrock*
Length O. A.	125′ 9″	126′ 0″	130′ 0″	120′ 9″	119′ 10″
Length W. L.	83′ 0″	83′ 0″	86′ 0″	80′ 0″	81′ 0″
Beam, Ext.	20′ 3″	22′ 6″	21′ 7″	21′ 8″	19′ 8″
Draft, Ext.	15′ 0″	15′ 0″	15′ 6″	14′ 8″	14′ 8″
Freeboard, per Rule	5′ 7″	5′ 7″	5′ 9″	5′ 4¾″	5′ 5½″
Displ. Long Tons	143	145	158	128½	134
Sail Area, Sq. Ft.	7560	7550	7550	7583	7540
Total Height of Mast	163	162	166	168	163
Deck to top of Sheave	152	152	152	153	153

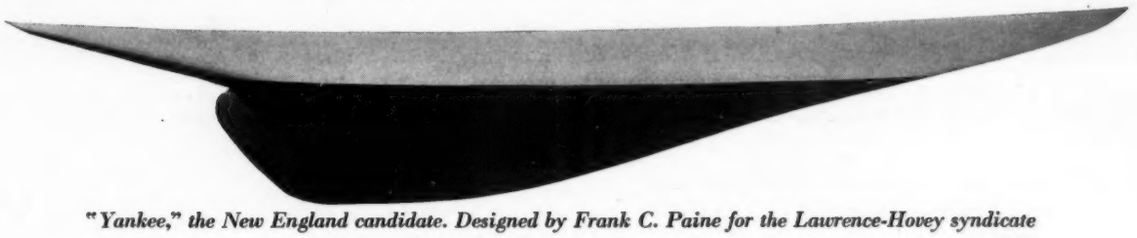
An examination of the foregoing table will reveal the principal characteristics of our yachts. *Weetamoe* is the narrowest; *Yankee* the broadest; *Whirlwind* the longest; and *Enterprise* the shortest. Further differences may be seen by studying the models of the four boats. Consider, for instance, their longitudinal profiles. On *Whirlwind*, for example, the bottom of the keel runs practically parallel to the load water line from the heel of the sternpost to the middle of her length. Rounding up from that point, it runs in almost a straight line to the forward end of the water line. A large area of lateral plane is secured by a profile of this type. Nevertheless, it has, to my mind at least, several disadvantages. First, with the large lateral plane comes an increase in wetted surface and, consequently, greater frictional resistance; second, the greater area tends to make the yacht slow in stays and also hard to balance. Due to the large area of lateral plane, the designer has omitted a centerboard.

At the other extreme in the matter of profiles is *Weetamoe.* Disregarding the rudder, she has a profile that is practically a triangle, with a straight line from the after end of the water line to the bottom of the keel and thence a line which is slightly convex, and then slightly concave to the forward end of the water line. A lateral plane of this type has minimum wetted surface and consequently lessened skin friction. The tendency is for such a boat to be quick on her helm. To ensure enough lateral resistance for windward work, a centerboard, working through the lead keel, is fitted.

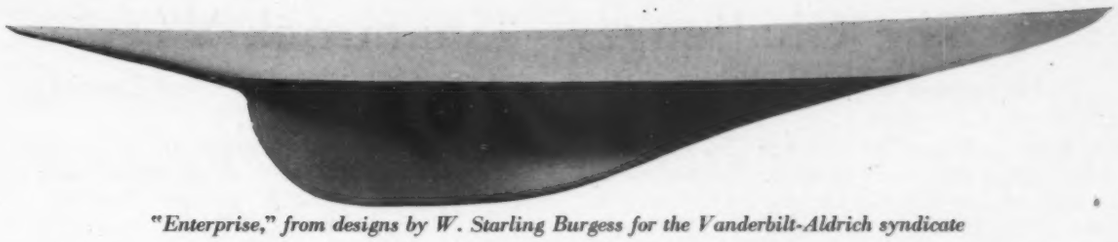
Yankee's profile is essentially of the same type as that of *Weetamoe,* except that her keel line runs straight and with a slight drag for about twelve feet from the heel of the rudder post. It then sweeps up to the water line in a graceful curve, first convex, then concave. *Yankee* has a small centerboard fitted just forward of her rudder post.

Enterprise's underwater profile resembles that of *Whirlwind,* but with her forefoot cut away to a greater extent. This should make her quicker in stays and easier to handle than *Whirlwind.* One advantage of this type of profile over that of *Weetamoe* and *Yankee* is that the center of gravity of the lead ballast is low, making for a stiff boat. *Enterprise,* like *Weetamoe,* has a centerboard working through her lead keel.

Above water, the outlines of the boats are much alike. The total length of the overhangs is about forty-three feet, half forward and half aft. *Weetamoe, Yankee* and *Enterprise* have the usual type of transom stern while *Whirlwind* has a canoe stern, as have several other yachts from the board of her designer. On *Yankee, Enterprise* and *Whirlwind* the sheer line is almost straight, while *Weetamoe* has decidedly more sheer than is usual in yachts of her type. It may be said here that sheer does not make a boat either fast or slow but has much to do, if properly designed, with making a good looking boat.



"Yankee," the New England candidate. Designed by Frank C. Paine for the Lawrence-Hovey syndicate



"Enterprise," from designs by W. Starling Burgess for the Vanderbilt-Aldrich syndicate

The transverse sections, drawn from a study of the models, show *Enterprise* as being the most normal in this respect, and by "normal" I mean that her sections are more like those of the previous Cup yachts (such as *Vanitie* or *Resolute*) than those of the three others. With her light displacement, large sail area and general hull form, *Enterprise* should be at her best in from light to moderate weather, and a very good "drifter."

Whirlwind's underbody gives the impression of power. The bulk of her displacement is high, which means hard bilges. It must be remembered that she has the largest displacement of the quartette, having almost thirty long tons more than *Enterprise*, the smallest boat. Her wetted surface must be considerably more than that of the others. Taking all of these things into consideration, and remembering that her sail area is practically no greater than that of the others, it may be said that she would be put to it to defeat any of them except in extremely heavy weather.

Yankee and *Weetamoe* show a decided similarity in the type of their transverse sections. Both have the bulk of their displacement lower than the other two. As closely as can be judged from the models, their sections approach the type of the smaller racing classes — slack bilges amidships, with full sections at the ends. This generally produces a "softer" boat, but one that has nice lines when heeled and that is apt to behave well in a seaway. Both of these yachts, judging from their longitudinal profiles, must have the center of gravity of the outside lead higher than do *Whirlwind* or *Enterprise*. This has its effect on their stability.

In comparing *Yankee* and *Weetamoe*, it is odd that the widest and the narrowest boats of the four should show the general similarities that they do. Due to her wide beam, *Yankee* is probably the most powerful boat of the lot, next to *Whirlwind*. Her easy lines should make her a better all 'round boat than the latter, at her best in moderate to heavy going and yet a boat to watch in light weather. *Weetamoe*, narrowest of the quartette, should have the least stability. Nevertheless, with her greater length and larger displacement, she might be just as powerful as *Enterprise*. Like that yacht, she should be at her best in light to moderate weather.

All four yachts have the so-called Marconi mainsails and all except *Whirlwind* have double head rigs. Hollow masts and booms, built up of clear western spruce or fir, are used. *Enterprise* and *Whirlwind* each has, in addition to the wooden stick, a hollow mast built of duralumin, which combines great strength with lightness.

As to hull construction, *Yankee*, *Enterprise* and *Weetamoe* are built with steel frames and deck beams, bronze shell plating and wooden decks. *Whirlwind* is built on the composite system, with steel frames and wood planking. *Yankee's* keel shows a variation from common practice. Ordinarily, the lead keel is cast in a mold and bolted to the main construction keel. On *Yankee*, however, the hull plating has been carried completely around the keel, making a trough in which the ballast is stowed.

"Iscyra II" Wins Atlantic Lipton Trophy on Gravesend Bay

G. W. ELDER, sailing *Iscyra II*, won the annual series for the Atlantic Lipton Trophy, held July 30th to August 1st, on Gravesend Bay by the Atlantic Yacht Club. The Western Long Island Sound Star, under the colors of the Manhasset Bay Y. C., won by a single point, overcoming on the last day a four-point lead that T. D. Parkman had built up with his *Fleet Star* in the first two races.

Fleet Star and *Ben Ma Chree* finished the series tied for second place. Mr. Parkman required just four points to become the permanent owner of this $4,000 trophy, after this year's winner has held it for a year. Second place would give him the necessary points, but before the sail-off is held there is a protest that must first be decided. This protest between *Meteor* and *Starbright* in no way affects first place, but since *Meteor* finished between *Fleet Star* and *Ben Ma Chree* on the day of the alleged foul, if *Meteor* is disqualified the tie will be broken, no sail-off will be necessary, and it will place *Fleet Star* third, thus depriving Mr. Parkman of the permanent possession of the trophy by one point.

The results follow:

Yacht	*Owner*	*Points*
Iscyra II	G. W. Elder	27
Fleet Star	T. D. Parkman	26
Ben Ma Chree	A. H. Goesle	26
Sea Gate	A. V. Guidet	22
Meteor	H. Chumsass	22
Katherine	A. P. Williams	20
Atlantic	Garbe & O'Shea	15
Saturn	W. J. & P. Kanz	14
Nick Nack	C. E. Lucke, Jr.	14
Starbright	Perroni & Webb	7
Lucky Lindy	N. J. Williams	3

"Whirlwind," largest of the four American aspirants. Designed by L. Francis Herreshoff for the Thorne-Hammond syndicate

The Challenger—"Shamrock V"

In His Second Cup Yacht Nicholson Has Turned Out a Challenger of Great Promise

IN HIS fifth challenge for the America's Cup Sir Thomas Lipton very wisely entrusted the design to the man who turned out his fourth challenger, of 1914, *Shamrock IV*. It will be remembered that the race for the Cup planned that year was postponed by the breaking out of the World War while the challenger was on the Atlantic, bound for the United States, and the match was not sailed until 1920. At that time Charles Nicholson, *Shamrock IV's* designer, was on the challenger during all of her racing in this country and had an excellent opportunity of studying our conditions, as well as our yachts built under the Universal Rule. The experience gained in that last match has, no doubt, proved invaluable in designing this year's challenger. Nicholson, moreover, has turned out several successful large cutters under the International Rule, and he is, perhaps, the foremost engineer in yacht construction in Great Britain.

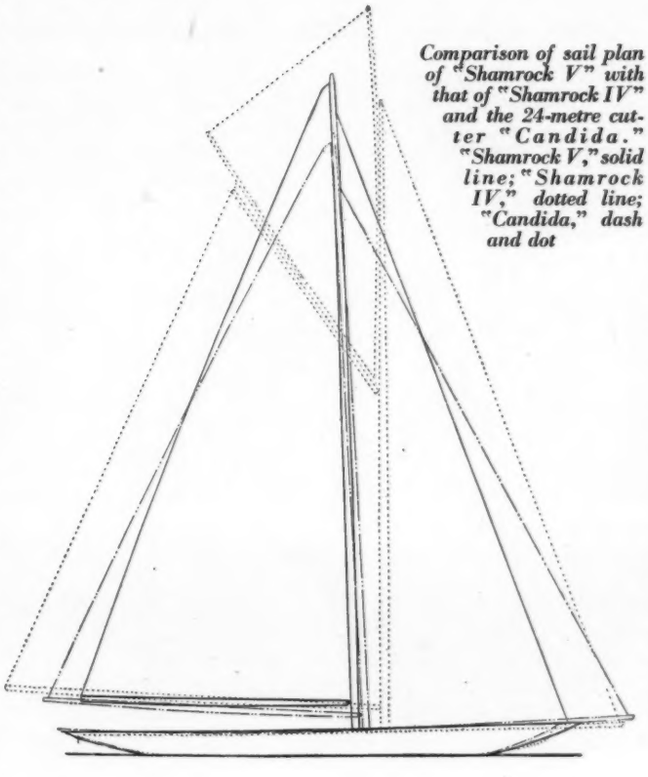
In his earlier challenger, *Shamrock IV*, Nicholson was under the handicap of having to design a yacht under a rule with which he was not familiar, whereas the American designers had had long experience in building to it. In that race, while the *Shamrock IV* was to be measured under our rule, the only condition imposed was the limit of water line, 75 feet. So Nicholson undoubtedly reasoned that he would do better to design an extreme type of yacht and take his chances with the time allowance tables. And "extreme" *Shamrock IV* was, for she disregarded almost entirely our rule of measurement.

But under the conditions this year, with both sides agreeing to build to the top of one of the Universal Rule classes and race without time allowance, Nicholson was bound by a rule with which he was more familiar than he was in 1914, though one to which he had never built a large yacht. In this respect, however, he was not at so much of a disadvantage as he had been with his former challenger, for with the retirement of Nathanael Herreshoff and William Gardner, practically all of our designers had equally as little experience as Nicholson in turning out large racing cutters under the Universal Rule, although, of course, they had had wide experience with the rule in the smaller classes.

One of the characteristics of our rule is that it allows great freedom in length and displacement with very little variation in sail area. With four boats being designed here to meet *Shamrock V*, Nicholson knew that there would be great variation in both length and consequent displacement, and he was therefore forced to choose between a small, light-weather boat or a large, heavy-weather one. He wisely (or so it would seem) chose the former. In the matter of length the challenger is smaller than any of our candidates except *Enterprise*, and is narrower than any of the four built to defend, having 19 feet 8 inches beam against the 20 feet 3 inches of *Weetamoe*, the narrowest of our quartette. *Shamrock V's* displacement is 134 tons, or less than that of any of our boats except *Enterprise*, of 128 tons. The latter is a very light-weather performer. Undoubtedly, then, Mr. Nicholson aimed to get a boat that would be at her best in light weather, which may be confidently expected in the middle of September. If it breezes up for any of the races — as it may — *Shamrock V* may be overpowered. But, then, so may our defender, provided one of the light-weather boats is chosen to defend, as now seems likely. The challenger's over all length is 119 feet 10 inches; water line, 81 feet 1 inch; draft, 14 feet 8 inches; and sail area, about 7540 square feet.

Shamrock V has great beauty of form. In fact, she is more pleasing to the eye than any of our four boats, with the possible exception of *Weetamoe*. She has, however, a very straight sheer, which was imposed upon her by the rule, which requires 5½ feet of minimum freeboard, so that in common with most of our boats she has but very little sweep of sheer. The bow sections are an easy convex "V," being a happy compromise between those usually seen on our Universal Rule boats and the "U" sections of the International Rule boats. This should make her easy to drive in a seaway. Her sail plan is all inboard.

The challenger is of composite construction, having mahogany planking 2.3 inches in thickness over a steel frame, the keel, stem and stern post being of wood, and conforming to Lloyd's specifications for this form of construction. She is fitted with a centerboard in the shape of a dagger plate, streamlined and built of teak, plated with bronze.



Comparison of sail plan of "Shamrock V" with that of "Shamrock IV" and the 24-metre cutter "Candida." "Shamrock V," solid line; "Shamrock IV," dotted line; "Candida," dash and dot

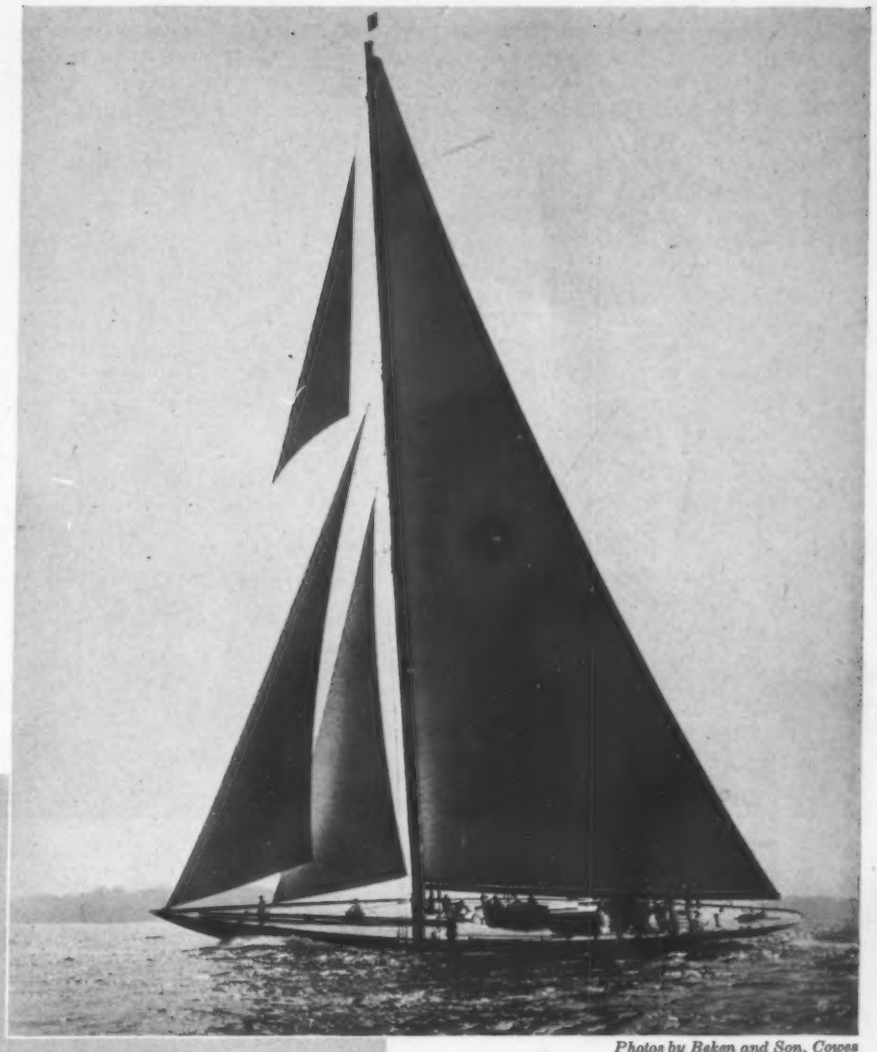
Such are the principal characteristics of *Shamrock V*. In her racing in home waters before she was refitted for the Transatlantic passage she proved very successful. In fact, her record at home was so much better than any of Sir Thomas's previous challengers that it speaks well for her chances.

In her racing season on the other side she met all of the large cutters in commission, in open races, where none of the other yachts gave the challenger any quarter. The yachts which *Shamrock V* sailed against included *Lulworth*, *White Heather*, *Britannia*. *Cambria* and *Candida*. It is true that the first three named are not new yachts, but they are larger than the

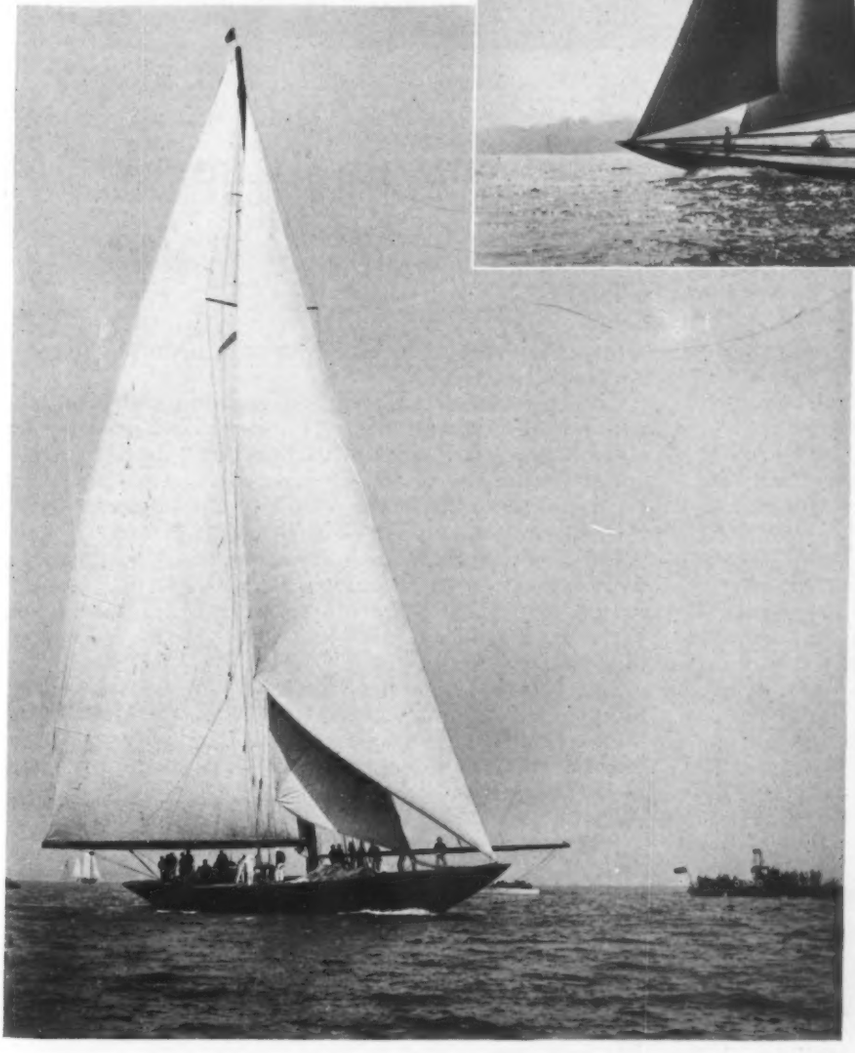
(*Continued on page 108*)

The Challenger, "Shamrock V"

Sir Thomas Lipton's fifth challenger for the America's Cup was designed by Charles Nicholson, and built at the Camper and Nicholson yard, at Gosport. The pictures show her during her racing in British waters, where she proved herself a fast boat



Photos by Beken and Son, Cowes



In her races in home waters "Shamrock V" took fifteen firsts and four seconds in twenty-two starts. In these races she met the best of the large British yachts in commission, including "White Heather," "Cambria," "Candida," "Lulworth," and the King's fine old cutter "Britannia." In many fo these races "Shamrock" beat the larger yachts without the benefit of time allowance

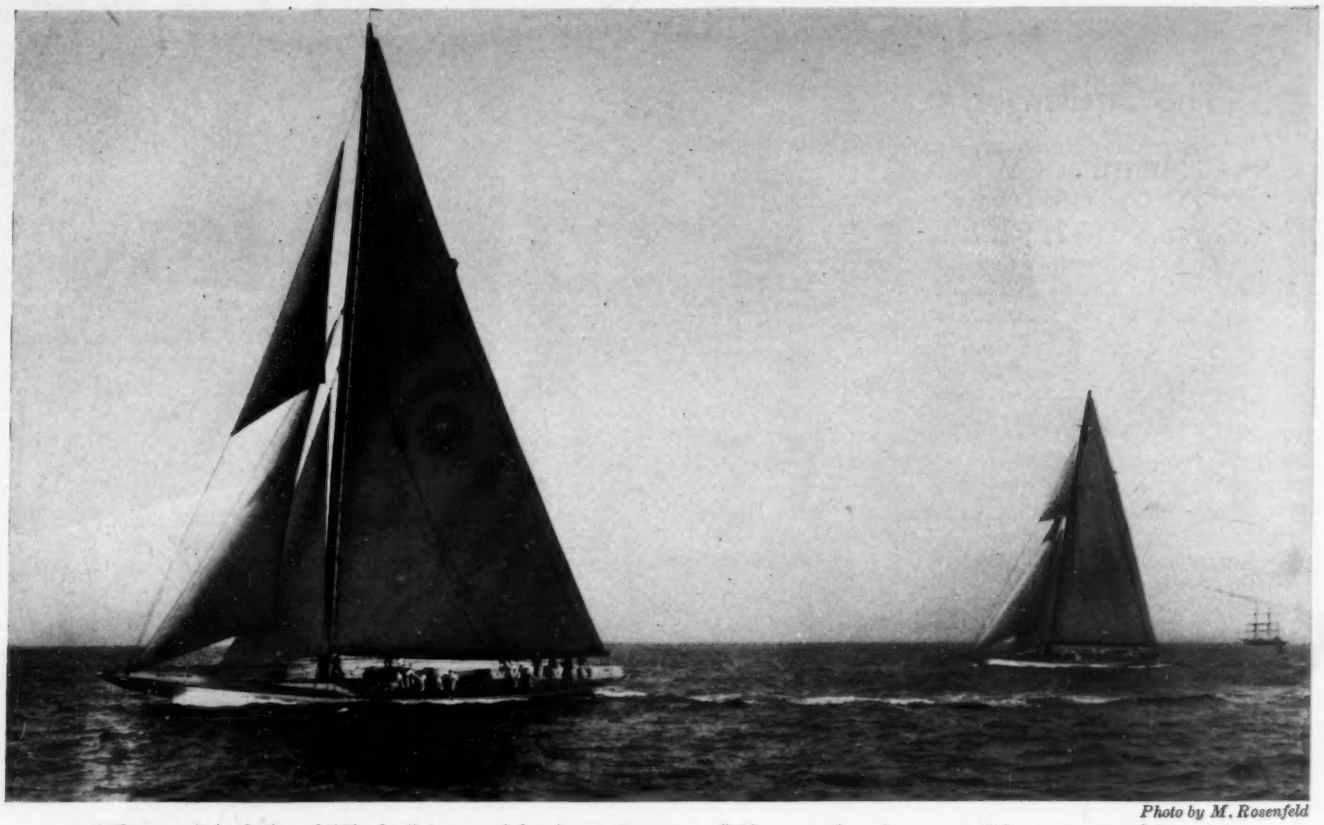


Photo by M. Rosenfeld

"Weetamoe" (at left) and "Yankee" in one of the observation races off Newport when the cup candidates were raced in pairs

Selecting a Defender for the America's Cup

Task of Selection Committee Not an Enviable One with Four Candidates to Choose From

By WILLIAM H. TAYLOR

THERE is probably no less enviable a task connected with the defense of the America's Cup than that of the selection committee. Whatever their decision, there is always the possibility that another would have been wiser. Suppose, for instance, that the committee chooses the defender on the basis that the best light weather boat is the most desirable, and then it blows hard all during the series and *Shamrock V* wins. Of course, it's all the committee's fault.

This committee, consisting of W. Butler Duncan, chairman, George A. Cormack, W. A. W. Stewart, E. Townsend Irvin and Joseph M. Macdonough, has been having its troubles, at least, up to the time this is written. Up to the end of the July series of observation races at least three of the aspirants were still running neck and neck, and promised to do so for some time to come.

The plan of campaign mapped out by the committee called for several informal races early in the season in which the four new boats raced together as a class, frequently with the older cup yachts *Resolute* and *Vanitie*. This was to be followed by a series of observation races during July, in which the four candidates were matched in pairs each day, the opponents being shifted for each race. Then, after the New York Yacht Club Cruise, the actual selection races were to be sailed over the international course off Newport, August 20th to 30th, the boats again sailing in pairs. After this the selection committee was to make its decision and announce the defender at least a week prior to the first international race.

The selection committee was very much on the job during the seven races held at various places prior to the observation series off Newport in July, but it is improbable that the results of those early races, in which *Enterprise* and *Weetamoe* were the outstanding boats, will weigh at all in the final decision. *Enterprise* had been in commission for several weeks, racing almost daily against either *Resolute* or *Vanitie*, and was in midseason form. The other three were practically fresh from the launching ways, untried, and by no means tuned up.

The observation series, therefore, provided the only fair medium of comparison up to the time this article had to be written. In that series the boats were raced in pairs, over the same courses that will be used for the cup races themselves, and under conditions as nearly as possible approximating those of the international series.

The first races were held in a moderate breeze and a ground swell, over a windward and leeward course. *Yankee* beat *Enterprise* by one minute 56 seconds, and *Weetamoe* beat *Whirlwind* by 3 minutes 32 seconds.

In the second race, with conditions similar, except that the ground swell had gone down, *Whirlwind* beat *Yankee* by 7 minutes and 25 seconds, and *Weetamoe* beat *Enterprise* by 26 seconds. *Whirlwind's* victory, however, was due solely to the fact that Secretary

Adams, sailing *Yankee*, split tacks with his opponent and allowed the Thorne boat to get away inshore where she picked up a fresher and favoring slant of wind and romped out to the weather mark ten minutes ahead of *Yankee*.

The third race, under similar conditions, saw *Enterprise* beat *Whirlwind* by 7 minutes 56 seconds and *Weetamoe* beat *Yankee* by 2 minutes 17 seconds. Next day, with the weather moderate again, *Weetamoe* beat *Whirlwind* 35 seconds and *Enterprise* beat *Yankee* 34 seconds, over a triangular course.

In the fifth race, again moderate conditions and a triangular course, *Yankee* beat *Whirlwind* 1 minute 35 seconds. *Weetamoe* was disabled when the headboard pulled out of her mainsail, the headboard having been badly mangled due to a faulty lead to the main halliard sheave.

The weather for the next race was very light, indeed — nothing more than a drift except for a few miles of the weather leg. *Enterprise*, starting fifteen minutes after *Weetamoe* and *Yankee*, was the only boat to finish within the time limit, drifting in a few minutes ahead of *Weetamoe*, which was not officially timed, and 35 minutes ahead of her own opponent, *Whirlwind*, which was far back with *Yankee*.

Monday, July 14th, the four yachts found a nasty sea and a breeze of about twenty miles' strength. *Weetamoe* and *Enterprise* both came out reefed and the latter's reef was so badly tied that it ripped the sail before she had even started. *Yankee* was giving *Whirlwind* a bad beating when *Whirlwind's* headboard also pulled out, so there was no finish in either division.

Flat calm prevented a race July 15th, and the next day, in a light breeze and smooth sea, *Weetamoe* beat *Yankee* 4 minutes 5 seconds and *Enterprise* beat *Whirlwind* 6 minutes 12 seconds, whereupon *Whirlwind* gave it up and headed for City Island to move her mast again in an attempt to eliminate her vicious weather helm.

The final race was sailed in a fresh, smoky sou'wester, "typical Newport weather" they called it, and *Yankee* had no trouble in outsailing both her rivals both on and off the wind. *Weetamoe* finished second, outrunning *Enterprise* after a close battle up wind. Two more days of racing were scheduled, but after the three-cornered race of Thursday the series was brought to a close at the request of the contestants, who desired time to make changes before the New York Yacht Club Cruise. Their experiences of those ten days had been sufficient to show them that changes were needed, mainly in rigging, and about what those changes should be.

How the changes will have affected the comparative speeds of the four boats when they come out for the final trials the last ten days of August remains to be seen. If they can make *Yankee* go a bit better in light weather, or *Weetamoe* or *Enterprise* a bit better in a breeze, that will alter everything. As things stood at the close of the observation series, *Weetamoe* seemed to be the outstanding boat in light weather, with *Enterprise* a very close competitor, while *Yankee* would beat them both in a breeze.

Weetamoe seemed to be good at about everything, and, though the tenderest of the quartette, did reasonably well even in a breeze. *Enterprise* might beat *Weetamoe* to windward, but if the latter rounded the weather mark within a minute of *Enterprise* she generally caught her on the run home. In a real breeze, the heavier and beamier *Yankee* could stand up under more sail than the others would risk, and outsail them on any point, but when it turned light she seemed just a shade too heavy to compete with the smaller pair.

Whirlwind, though she could show flashes of great speed on an occasional run or reach, looked pretty hopeless. On the wind she would generally sag off to leeward,

(*Continued on page 114*)

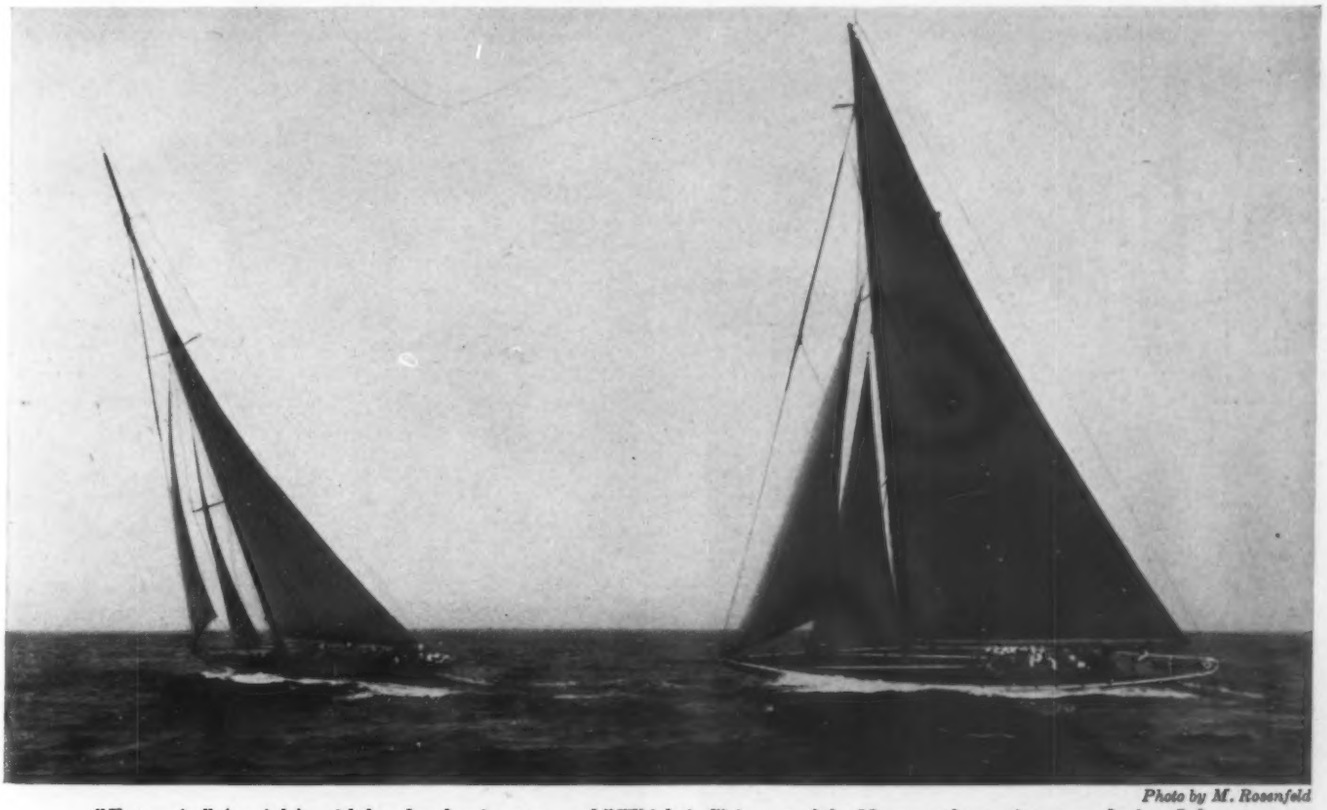


Photo by M. Rosenfeld

"Enterprise" (at right), with her duralumin mast, and "Whirlwind" in one of the Newport observation races during July

The long and short of it in the afterguard of "Enterprise." Harold S. Vanderbilt (left) who has sailed the yacht in her races, and C. Sherman Hoyt. The other members of the afterguard of "Enterprise" are Winthrop W. Aldrich, C. F. Havemeyer and W. Starling Burgess

George Nichols (left), the skipper, and Clinton H. Crane, designer of "Weetamoe." Mr. Nichols has had long experience in handling large yachts, and during the trial races of 1920 for the America's Cup he sailed "Vanitie." With him in the afterguard are R. W. Bavier, J. S. Morgan, Jr., syndicate manager, John Parkinson, A. H. Eustis and C. H. Crane

John S. Lawrence (below) and his daughter, Miss Isabel Lawrence, at the launching of the Boston Syndicate Cup aspirant "Yankee," designed by Frank C. Paine. Mr. Lawrence has charge of the big yacht and has sailed her in most of her races except when Charles F. Adams was at the wheel. Another syndicate member, Chandler Hovey, has also been aboard in many of her races

Charles Francis Adams, Secretary of the Navy, at the wheel of "Yankee." He has sailed the Boston boat in many of her trial races. In the last Cup match Mr. Adams sailed the defender, "Resolute," being the first amateur to handle an American defender in a Cup series

W. Starling Burgess, designer of the Vanderbilt-Aldrich Cup candidate "Enterprise." Mr. Burgess's father, Edward Burgess, designed the successful defenders "Puritan," "Mayflower" and "Volunteer"

Landon K. Thorne (left) and Paul Hammond who head the syndicate which built "Whirlwind." These two have sailed the yacht in most of her races. Mr. Hammond formerly owned the N. Y. Y. C. Fifty-Footer "Iroquois," and sailed his ocean racer "Nina" in the race to Spain in 1928

L. Francis Herreshoff, designer of "Whirlwind." He is a son of Nathanael Herreshoff, of Bristol, who designed all of the American defenders from "Vigilant," in 1893, to "Resolute," 1920

Sir Thomas Lipton, now engaged in his fifth challenge for the America's Cup, in the cockpit of his 23-metre "Shamrock." The only challenger in 35 years, Sir Thomas, by his very persistency, has made many friends in the country. He is now 80 years of age. "Shamrock V" will be sailed this year by a professional skipper, Captain "Ned" Heard

The History of the America's Cup

By HERBERT L. STONE

ITH Sir Thomas Lipton's fifth challenge for a race this year, the match to be sailed off Newport, between *Shamrock V* and whichever one of our four candidates is selected, will be the fourteenth time we have been called upon to defend the America's Cup. Won originally in 1851 and presented to the New York Yacht Club six years later, it was not until 1870 that a challenge was received. As the battles for the ancient piece of silverware through the subsequent sixty years have had such a marked bearing on the development of yachting and yacht design in America, and have been productive of many bitter controversies which were as hotly waged in the press as the races were on the water, a brief sketch of the history of those races, and of the winning of the Cup by the first American yacht to cross the Atlantic to race in a foreign country, properly belongs in this issue of YACHTING. Though the story as a whole is familiar to yachtsmen who have followed the sport closely, many of the details have been forgotten in the lapse of time, while to the present generation most of the story of the long struggle will be new.

The America's Cup

In England, yacht building and yacht racing flourished in the first half of the last century, and yachting had become a recognized sport, particularly of the leisure class. As early as 1850 there were a number of yacht clubs and a good sized racing fleet. The situation was different in America where there was but little time, and, as a rule, insufficient means in the comparatively young republic to build vessels for pleasure purposes alone. It was not until 1844 that a group of New York gentlemen met aboard the schooner *Gimcrack* in New York Harbor and formed the New York Yacht Club, with an enrolled fleet of only eight yachts. This was the first organized yacht club that endured in this country, and its growth at first was necessarily slow.

But while we did not have many yachts, the merchant marine of the United States was in the heyday of its existence and the pilot fleet of New York Harbor had to keep pace with the growing business of the port. These little schooners, that cruised all the way from Nantucket to the Delaware Capes in the keen competition to put a pilot aboard a "homeward bounder," had, necessarily, to be staunch, able and, above all, fast. While the English had not heard much about our yachts, the fame of these pilot boats had spread abroad. As there was to be a great World's Fair in England in 1851, they suggested that it would be fitting if America would send over a yacht that year to take part in the races that were to be an auxiliary feature of the exposition. As most of the larger English yachts were schooner-rigged, it was suggested that one of the New York pilot boats be sent, the Englishmen being anxious to try their schooners and cutters against the Yankee fore-and-afters. Though no mention of any definite prizes was made, it was intimated that there would be plenty of competition. The commodore of the Royal Yacht Squadron also sent an invitation to Commodore Stevens, of the New York Yacht Club, to come to England in 1851 with an American yacht and be the guest at the Club House at Cowes, even then a famous yachting center, during their stay.

The idea appealed to Commodore Stevens, who was a thorough sportsman, and he set about organizing a syndicate to build a suitable boat to represent his country abroad. It was decided that the yacht be named *America*, and it was but natural that the owners should turn to George Steers to model the new craft. Steers had lately come into fame as the builder of fast pilot boats, having turned out one that discarded the previous theory of design and had proved a great success, outsailing all the other boats. Her bow was long and sharp, her greatest breadth farther aft than in the existing models, and she had an easy run. Steers was undoubtedly influenced by Commodore Stevens and the experimenting he had done, in the development of his model and in the model of *America*.

The *America* was built in New York at the yard of William H. Brown, at the foot of East 12th Street. She was a keel schooner, 101 feet long over all, 23 feet beam, and 11 feet draft. Her masts had the excessive rake of the pilot schooners, while she carried no fore topmast and had a single big jib. Her total sail area was 5,263 square feet. The yacht was ready on June 21, 1851, was towed down to the Hook, where she made sail and headed to the eastward, carrying with her the hopes of her owners and of a large part of the American people. She was the last word in American shipbuilding and she was going forth to meet the pick of England's yachting fleet. Aboard her was a little company of thirteen men, including George Steers, while Captain "Dick" Brown, a Sandy Hook pilot, was in command. Commodore Stevens was to meet her on the other side. She had a fine run across, arriving in Havre, France, July 11th, where she was refitted before proceeding to Cowes for the racing.

On arriving at Cowes early in August with the *America*, Commodore Stevens had great difficulty in arranging a race for his schooner. This was due, probably, to the fact that in an unofficial brush on her arrival with the crack English cutter *Laverock*, the *America* had beaten the cutter so badly that the English yachting community believed that there was no English yacht that could go to windward with the visitor. The Englishmen were very hospitable but would not sail a match against the American boat. In vain Commodore Stevens offered to match his boat against any of their schooners, and later even enlarged the challenge to include cutters as well. Thinking the stakes might not be high enough, he posted a challenge in the clubhouse to sail the *America* against any British vessel whatever for any sum from one to ten thousand guineas, merely stipulating that there should be not less than a six-knot breeze. This brought no response, and was withdrawn.

Finally, the officers of the Royal Yacht Squadron notified Commodore Stevens that there would be a regular open regatta to be sailed around the Isle of Wight, a distance of 53 miles, on August 22nd, for which all of their boats would be eligible, and sailed without time allowance. The *America* would be welcome if she cared to enter. Although this meant racing against a whole fleet of all sizes and types, instead of against only one boat, Commodore Stevens accepted the invitation. The prize was to be a cup put up by the club, valued at 100 guineas.

The race was started from anchor, as was the custom in those days, instead of by a sailing start, as now. At ten o'clock on August 22nd, when the starting signal was given, the *America* found 17 British yachts pitted against her, of all rigs, and in size ranging from 47 to 392 tons. The following picturesque account of the race was given by Henry Steers, the nephew of the designer, who was on board.

"The wind was from the westward. The yachts were allowed to get up their sails after the first gun, but we found that we constantly overran our anchor in the tide and we had to lower our sails again so that all the yachts got off ahead of us; however, we had a large crew and got our sails up very quickly. By the time we got to the Nab Lightship (12 miles) we had walked through the whole fleet except four, these being *Beatrice*, *Aurora*, *Volante* and *Arrow*. We were running wing and wing, and these boats would steer close together so that we could not get through them without fouling, and had to keep cutting and sheering about, often being near jibing. From the Nab to St. Catherine's the wind was ahead and there we left them so fast that when we got down to the Point there was not a yacht in sight. Here we caught the tide and for a time made little way beating against it so that the little *Aurora* came up pretty near us, with the *Arrow* just behind her. After getting by St. Catherine's we had a leading wind and went from there to the Needles at the rate of 13 or 14 knots. Off St. Catherine's we carried away our flying jibboom, and I remember Dick Brown, the skipper, saying he was d—d glad it had gone as he didn't believe in carrying a flying jib to windward, anyway."

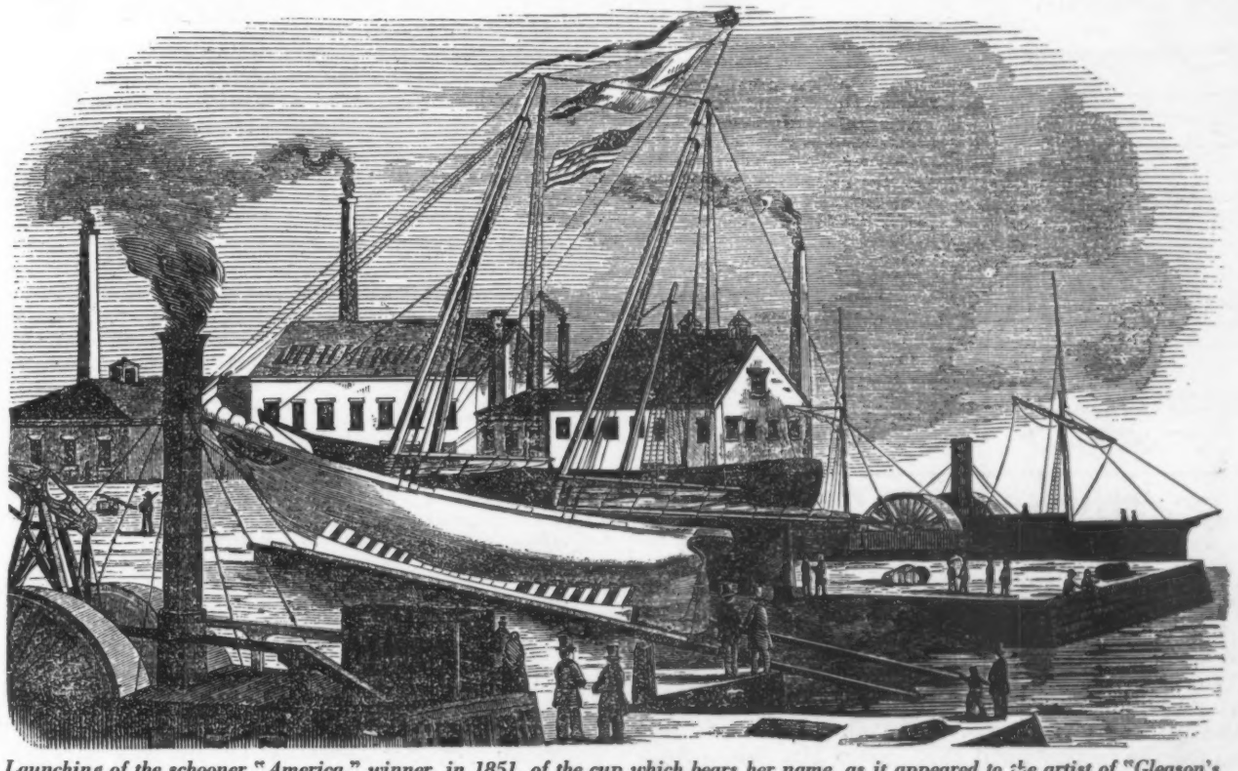
It was 5:40 P.M. when the *America* rounded the Needles, at which point it was estimated she was a good eight miles ahead of the second boat, with the rest of the fleet out of sight astern. But the wind fell light again and the tide ahead, and in the run up the Solent in the evening the *Aurora* gained, being still a long distance astern at the finish. The records of the finishing times are confusing, some giving the *America* as winning by 8 minutes and others by 18 minutes.

Thus the little *America* won the cup put up by the Royal Yacht Squadron, and called the Hundred Guinea Cup, known more familiarly since then as the America's Cup after the boat that first won it. It has been frequently, though erroneously, called the Queen's Cup, though Queen Victoria had nothing to do with it and did not donate it.

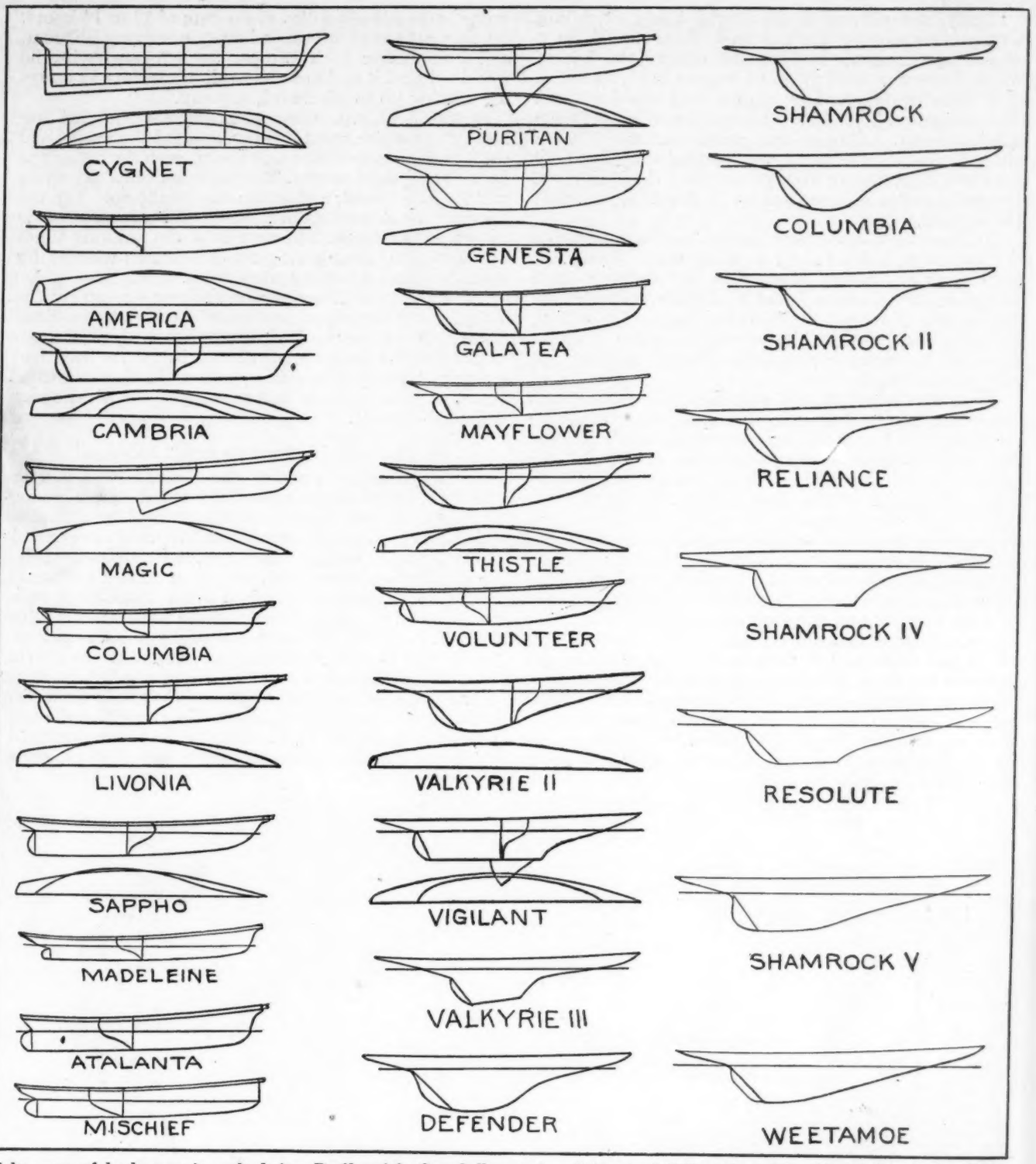
Subsequent History of the "America"

After the season's racing the *America* was sold in England, where she remained for a number of years. During our Civil War she was purchased by a Southerner and used as a Confederate blockade runner and cruiser, finally being chased up the St. John's River, Florida, by a gunboat where she was scuttled and sunk. The Union Government raised her and used her as a naval vessel for many years and she was finally sold to Gen. B. F. Butler. He had her rebuilt and used her for a yacht. She is still alive, being preserved at the Naval Academy at Annapolis.

In 1857, Commodore Stevens and the syndicate which built the *America* decided to turn the cup which she had won over to the N. Y. Y. C., to be held as a perpetual challenge cup for international racing of the highest



Launching of the schooner "America," winner, in 1851, of the cup which bears her name, as it appeared to the artist of "Gleason's Pictorial" of that date



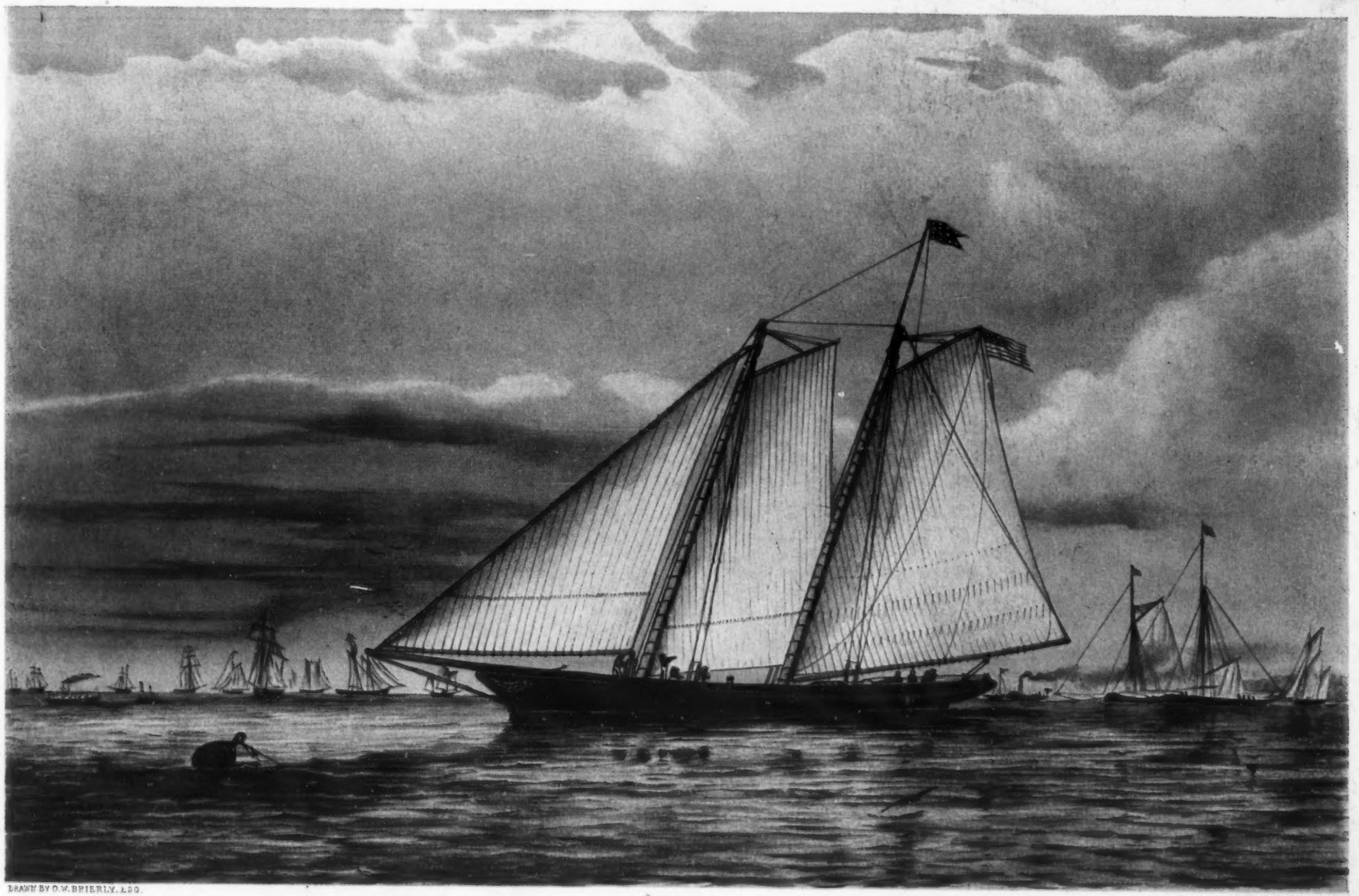
Eighty years of development in yacht design. Profiles of the Cup challengers from "America," 1851, to the present. Though the selection of this year's defender has not yet been made the outline of "Weetamoe" is shown as typical of a modern Class J racing yacht. The "Cygnet," at the top of the page, shows the apple-bowed type of the period before George Steers designed "America"

type. Any foreign yacht club should have the right to sail a match for it upon challenging and giving six months' notice, the competing vessel to be not less than thirty and not more than three hundred tons measurement. Although notice of the offer of this cup was sent to the principal European yacht clubs, no race was sailed for the trophy until 1870, when Mr. James Ashbury, an Englishman, owner of the fast schooner yacht *Cambria*, challenged, after having spent most of the previous year in writing letters and trying to arrange terms satisfactory to him.

The First Challenge

The *Cambria* raced across the Atlantic against the American schooner *Dauntless* on her way to the Cup

(*Continued on page 126*)



DRAWN BY O.W. BRIERLY. A.S.O.

LITHº BY T.O DUTTON

THE "AMERICA", SCHOONER YACHT.

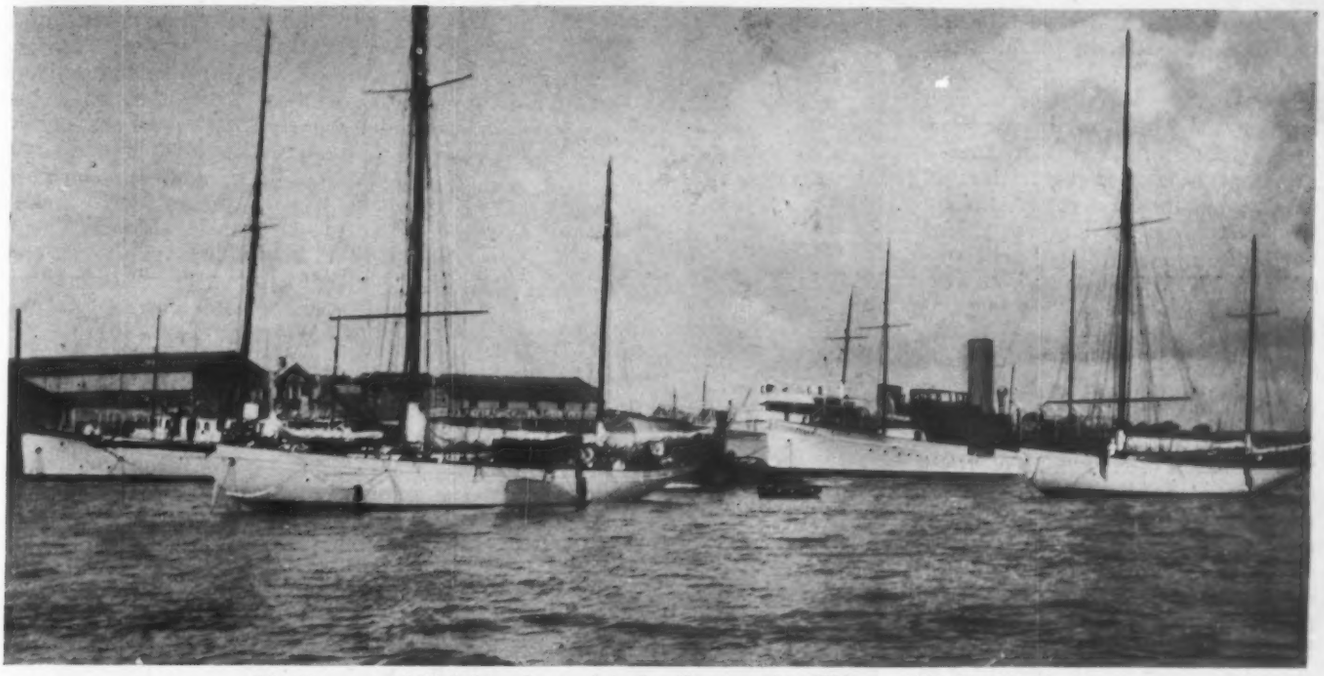
To John C. Stevens. Esq. Commodore of the New York Yacht Club

this Print is with permission, respectfully dedicated by

Oswald W. Brierly

Day & Son. Lith.rs to The Queen.

London Published Sept.r 1851. by Ackermann. 96 C. Strand



The Camper and Nicholson shop and yard at Gosport, where "Shamrock V" was built

Charles Nicholson, Designer of "Shamrock V"

A Personality Sketch

By ARTHUR LAMSLEY

THE designer of *Shamrock V*, Charles Nicholson, leaves a vivid impression that lasts long after one has left him, an impression gathered not so much from his simple, yet charming conversation, or from his old-world courtesy, but from an unseen power one intuitively feels, and which is born of a personal philosophy he must have garnered from a life in constant communion with primitive forces. His humorous and kindly eyes betray a space-fed imagination, and his speech is a little hesitating, a searching for the right words to convey the directness of his thought. He is typically English — his cordiality is shy and reserved, yet reflects intense sincerity, and reveals a generous heart.

Effort on the part of Charles Nicholson is tense and concentrated. He can work for many hours, completely oblivious of everything around him, and even when watching a yacht race from the shore he is so enthralled that one feels the mind of the designer is in coöperation with the wind to speed the craft along. But it is on board one of the big sailing yachts that he is obsessed — a part of the spirit of the race. He is out to win, the sporting tenacity of his thought finding an answer in the craft which appears to be straining every inch of her canvas at the dictates of his will.

How his slight physique can stand the consuming fire of his ceaseless activity is a miracle; at times he must have worked it almost to the breaking point, but self-understanding is not least among his gifts. Few men are more active than he, and none enjoys his work more, for his work is also his sport and his recreation, an exercise of long hours which would be unendurable to most men, undertaken for the joy of accomplishment and creation.

A self-possession that is impressive, and a shy detachment are characteristic of Nicholson. I had a fine opportunity, during the launching of *Shamrock V*, to watch this baffling reserve. He had initiated Lady Shaftesbury into the ceremony of christening the yacht, the rich golden-colored wine was dripping from the graceful prow, and the dog shores had been knocked away. There was a tense silence — for a few moments the yacht did not move, but seemed contented to remain serenely poised on her building slip. She "stuck," and the hundreds of visitors in the shed watched with breathless expectation — and not a little awe — for the first signs of her animation.

Nicholson stood unperturbed. Calmly he gazed out across the waters of Portsmouth Harbor, confident that in a few seconds the new yacht would glide into the empty space of water reserved for her sea baptism, which he was waiting for so intently; but not even the chorus of workmen who shouted "Heave-o! There she goes!" as they "lifted" on the handspikes and gave the final push which sent the *Shamrock* sliding down the slip, made him turn his head. In his mind the yacht was already launched, and he was carrying on the next task of stepping her mast. He smiled slightly as he saw the beautiful lines of the challenger being covered by the gray-green English waters. To all appearances the designer was the calmest person amongst the thousands who watched the launching; yet his seeming unconcern may have been tinged with the sadness of farewell as another of his beautiful creations, like a child grown-up, left her first home in quest of adventure.

He has launched many yachts, of every size and description, and not a few of them have become famous,

but never a yacht whose building has so captivated the imagination and the hope of landsmen and seamen alike. He had built and launched the fifth challenger for a great sportsman, and rekindled the hope of a sporting nation. It was a great moment for Nicholson when *Shamrock V* slipped out of her building shed. This yacht was a materialized ambition, a coördination of aspiration and inspiration, and the execution of his craftsmanship.

He told me recently that "the building, as well as the sailing of yachts, is the finest sport in the world. There is always an element of fascinating uncertainty in it. It is one of the few crafts left in the modern world where art, sport, and work are all combined. Yacht designing is still more of an art than a correct science, and will, as far as I can see after forty years' experience, remain so. It refuses to be modernized by the scientific accuracy of the mathematician, or yield to the formulas of the builders of boats of a certain size and a certain horse-power promising a definite speed per hour. Not so with building a racing yacht. We design and re-design, and the speed of our yachts depends upon the harmony of line, upon sail area and its efficiency, wind — and seamanship not least. In yacht racing art and sport are subtly combined. For this reason its popularity will increase. The sailing yacht will ever appeal to the artistic and the sporting instincts in man."

Charles Nicholson

A characteristic trait in Charles Nicholson is his manner and social bearing towards all those who have the good fortune of coming in personal contact with him. In his yacht yard it is always "we" and never "I," when discussing matters of work, for he believes we are all interdependent. He is acutely sensible to the fact that none of his creative dreams would have materialized unless his craftsmen and working associates lived in harmony with him. Like his forefathers, who have been builders at Gosport for the last 140 years, he keeps an intimate, personal contact with his workmen. The growing success of his yacht yard is a striking tribute to the treatment of his staff, and the response they make. They do not work *for* him, but *with* him.

When Charles Nicholson takes his recreation, he goes down to the sea and cruises or races in the Solent and Southampton Water in one of his yachts. He is never happier than at the helm of his eight-metre *Folly*, racing against yachts of her class. He is a splendid seaman, and handles a yacht in the manner born. His decision and accuracy of judgment in racing are remarkable, for he understands the way of the wind. This primitive wrestle with wind and wave is a soothing relaxation from his labors as a designer and builder. Some make of yacht racing hard and anxious work — to him it is the greatest enjoyment. When he sails one of his new yachts that pleases him, a shy smile is the only indication of his satisfaction.

I have seen him take what we in England call a "busman's holiday," and be a mere looker-on at the International Model Yacht Races on Gosport Lake. He is just as keen a spectator as he is a yachtsman, and followed his fancy along the lakeside to make sure she would win!

Yachts are the symbol of Charles Nicholson's life and thought. He sees the world as a healthier and happier place for the sport of yacht racing. An enthusiastic advocate of international yacht racing, the designing and building of the challenger no doubt marked for Nicholson a unique point in his career.

Photo by Beken & Son, Cowes

Launching "Shamrock V" at the Camper and Nicholson yard

Photos by R. L. Morton, Boston

Sailing a modern cup defender. From photographs taken on "Yankee" during one of her early races. Top, left, handling the balloon jib; right, Genoa jib sheeted in hard. Center, tailing on to the jib sheet jig. Bottom, left, looking aloft along luff of mainsail before it is stretched taut; and, right, the 'tween decks gang on the main halliard

Conditions for the 1930 Race for the America's Cup

To Be Sailed off Newport, R. I., Commencing September Thirteenth

THE following are the full conditions for this year's match for the America's Cup, as agreed upon by the Committees of the Royal Ulster Yacht Club, the challenger, and the New York Yacht Club, the defender.

1. DATE OF RACES:

   The first race shall be sailed on Saturday, September 13th, 1930, and the races shall be sailed on every succeeding weekday, provided however that immediately on the conclusion of each race the Race Committee shall enquire of each contestant whether he is willing to start the next day. Should either contestant reply in the negative one day shall intervene before starting the next race. Sunday shall not count as such intervening day.

2. NUMBER OF RACES:

   The match shall be decided by the best four out of seven races.

3. COURSES:

   Races shall be started from a mark anchored nine nautical miles S. E. (Magnetic) from the Brenton Reef Lightvessel.

   First Race — Fifteen nautical miles to windward or leeward and return.

   Second Race — A triangle with approximately ten nautical miles to the side.

   Third Race — Fifteen nautical miles to windward or leeward and return.

   Fourth Race — A triangle with approximately ten nautical miles to the side.

   Fifth Race — Fifteen nautical miles to windward or leeward and return.

   Sixth Race — A triangle with approximately ten nautical miles to the side.

   Seventh Race — Fifteen nautical miles to windward or leeward and return.

   All races to be started to windward if in the opinion of the Race Committee it is possible.

   The compass direction of the courses to be signalled as early as possible, and the Tug bearing the marks to be started not less than ten minutes prior to the Warning Signal.

4. SIGNALS:

   The warning signal shall be made ten minutes before start.

   Five minutes after the warning signal the preparatory signal shall be made.

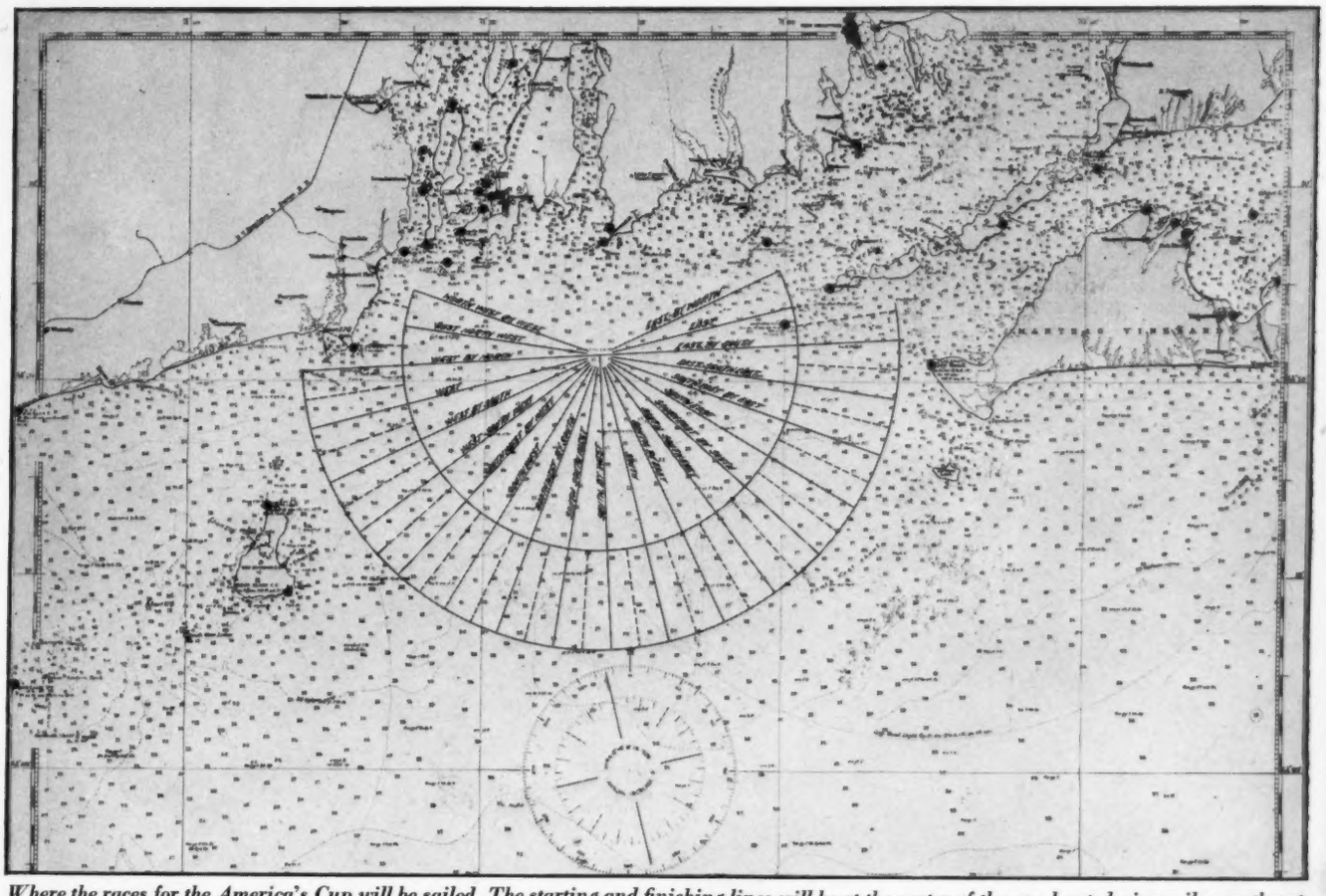
   Five minutes after the preparatory signal the starting signal shall be made.

   The time of the starting signal shall be taken as the time of the start of both yachts.

5. START:

   The warning signal shall be given as nearly as practical at 10:30 A.M. (E.S.T.) No race shall be started after 12:30 P.M. (E.S.T.)*

* Wherever time is referred to in these conditions it is Eastern Standard Time.



Where the races for the America's Cup will be sailed. The starting and finishing lines will be at the center of the arc, located nine miles southeast of Brenton's Reef Lightvessel. The windward and leeward courses will take the yachts to a point on the outer circle, fifteen miles from the start. The triangular races, ten miles to a leg, will take the contestants to two points on the inner circle. The compass courses will be set from the committee boat each day

6. POSTPONEMENTS:

The time of the warning signal shall not be changed except as follows: —

a. By the Race Committee in case of fog.

b. By the Race Committee if, in their opinion, the space around the starting line is not sufficiently clear at the time appointed for the start.

c. By the Race Committee if, in their opinion, the wind is so light or fickle that it is not practical to determine a windward or leeward course.

d. In case both yachts consent to a postponement, in which case the Race Committee shall determine the time of the start.

e. If in the opinion of the Race Committee the weather shall be, at the time appointed for the start of any race, or threaten to be, of such severe character as not to afford a reasonable opportunity of fairly testing the speed of the two yachts, the race may be postponed in the discretion of the Race Committee, unless either contestant shall insist upon its being started.

f. In case of serious accident to either vessel as hereinafter provided.

The Race Committee of the New York Yacht Club, in whose hands rests the management of the race. Left to right: Colgate Hoyt, Edmund Lang, chairman, Philip R. Mallory

7. TIME LIMIT:

If in any race neither yacht goes over the course in five and a half hours such race shall not count and shall be resailed.

8. UNFINISHED RACES:

An unfinished race or a race resulting in a tie shall be repeated until finished.

9. NEW YORK YACHT CLUB RULES TO GOVERN:

The measurement, scantling and racing rules of the New York Yacht Club shall govern the races, except insofar as the same may be inconsistent with the provisions of this agreement.

FIXTURES AND FITTINGS.

b. Doors, bulkheads, galley and forecastle fixtures and fittings need not be carried.

c. A water tank or tanks of the aggregate capacity of 400 gallons shall be carried and kept in place.

d. The usual plumbing appurtenances to the number of three shall be installed and carried.

10. MAINSAILS:

Mainsails shall be jibheaded.

11. TIME ALLOWANCE:

There shall be no time allowance.

12. RATING:

Yachts shall not rate over 76 feet.

13. SELECTING THE DEFENDER OF THE CUP:

At least one week before the first race the Challenger shall be informed of the yacht selected to defend the Cup.

14. ACCIDENTS:

(1) In case a serious accident occurs to either vessel prior to the preparatory signal, she shall have such time, not exceeding in any event four weeks, as the committees representing the two Clubs shall determine to be reasonable to effect repairs before being required to start, or if such accident occurs during a race, before being required to start in the next race; but no such allowance of time to repair shall permit of any race being sailed after October 31, 1930.

(2) If either yacht be disqualified in any race, such race shall be awarded to the other yacht, whether or not she shall complete the course.

(3) If through the fault of either yacht, the other be destroyed or so injured as to be incapable of repair, and the latter shall be free from fault, the match shall be awarded to her.

15. REPRESENTATIVES:

Each Club shall by its Committee name a representative who shall be present at all measurements and shall be on board the yacht representing the other Club during all races.

16. MEASUREMENT:

In order to establish the load water-line plane, the competing yachts shall be measured with all dead weights on board which they intend to carry during a race, but without crew, and the load water-line thereby determined shall be the basis of the established load water-line plane.

Not less than seven days before the first race, the measurement certificates of both yachts, signed by the Measurer of the New York Yacht Club, shall be filed with the Secretary of the New York Yacht Club.

If either yacht in any way changes her L. W. L. or sail plan as officially taken she must obtain a remeasurement by special appointment before the next race, and must report the alteration to the Measurer, at the Club Station at Newport by 9 P.M., of the day before the race following such alteration, and must arrange with him for remeasurement, and, if required, be in Brenton Cove by six (6) o'clock A.M., of the day of said race, and there remain until seven (7) A.M., if necessary for purposes of inspection of marks or remeasurement.

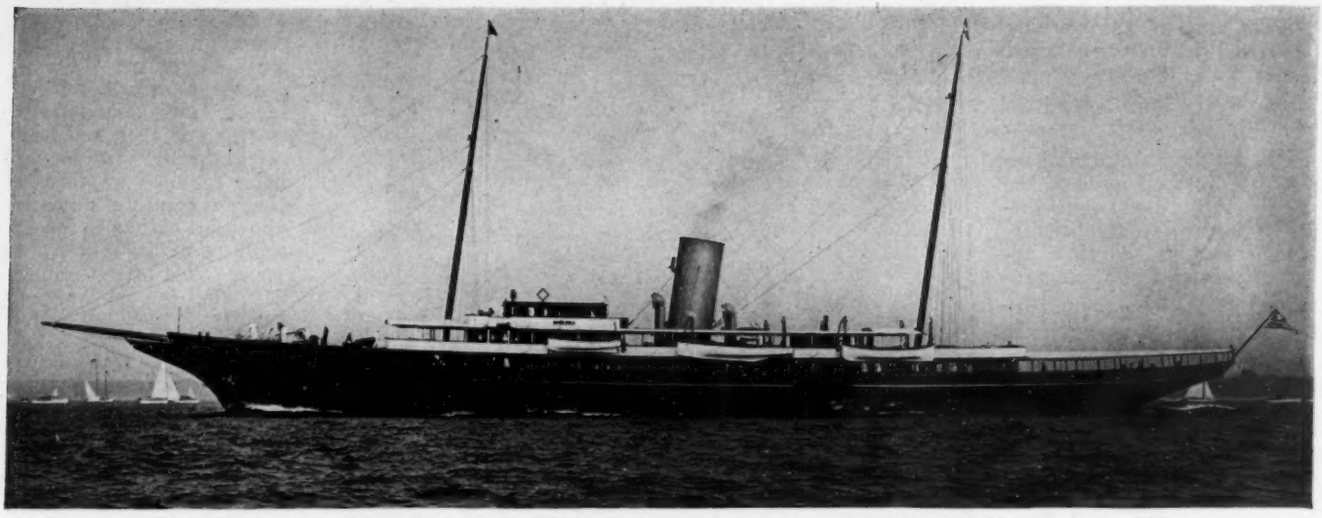
If either yacht shall take in or remove ballast or dead weight, she must notify the Measurer and be at his disposition for inspection of marks or remeasurement as above described.

All measurements certified to by the Measurer shall be final and not be subject to protest by either party.

In the event of the Measurer being unable to obtain a measurement which he considers accurate before a race, a remeasurement shall be taken as soon as possible after the race.

U. S. Coast and Geodetic Survey Chart No. 1210

A SPECIAL new edition of U. S. Coast and Geodetic Survey Chart No. 1210 of the section from Marthas Vineyard to Block Island has just been issued by that service. According to Lieut. Comdr. R. F. Luce, of the New England district of that service, this is primarily for the benefit of yachtsmen taking part in or desiring to witness the international cup and trial races to take place this summer off Newport.



The new "Corsair," built recently for J. P. Morgan, uses electric drive, power being furnished by two steam turbines. Designed by H. J. Gielow, Inc.

Electricity for Yacht Propulsion

Increase of Speed and Decrease of Weight of Diesel Engines Bring Many Benefits to the User of Electric Transmission

By T. ORCHARD LISLE

Mem. Inst. Mar. Engrs. (England), Assoc. Mem. Soc. Naval Engrs. (U. S. A.)

APPROXIMATELY one hundred American vessels, including half-a-dozen yachts, are operated by central electric power plants which enable every function to be carried out by the simple motion of throwing a switch or pulling a controller handle. Those in charge of the engine-room or in command on the bridge have exact "finger-tip" control of every piece of machinery for propelling and maneuvering, from zero to full speed, without any change in the governor-regulated main engine speed. The navigator, engineer, or owner can observe from as many positions as it may be desirable to locate the sensitive indicating instruments, whether or not these operations are being efficiently performed. Many of these craft have Diesel engines to drive the electric generators, while others — including a great yacht just put into commission — use steam for this purpose. The craft referred to above uses steam because it was decided that sufficient power to drive her at 18 knots could not be obtained from American Diesel builders within the limitations of low weight and small space which obtained.

It is, however, necessary to qualify the last statement. While it is true that Diesels within the specifications could not be taken out of "stock" from the plant of any manufacturer, I am confident that several reputable engine builders are quite capable of constructing such light-weight engines if given a free hand and the time necessary for thorough shop tests and adequate trials to iron out initial difficulties. Let us not forget that a big yacht is virtually custom built from stem to stern, and is rarely duplicated. First cost is not the paramount consideration as with a commercial ship, so why expect to obtain from stock, or standard design, the engine best suited for the job?

Obviously, any form of steam propulsion on a yacht cuts down the accommodations, and introduces the inconvenience of heat permeating throughout the ship. In tropical waters this can be very unpleasant. Diesel engines and their exhaust piping can be so lagged and cooled that no heat will pass to the living quarters. It is merely a question of efficient engine-room design. Diesel installations in hundreds of large yachts recently built indicate clearly a preference for Diesel power over steam. It is my purpose to show that Diesel-electric drive is more efficient and more satisfactory than steam or even direct Diesel propulsion, and that the system can be made available to the largest yachts contemplated today, as well as to "little fellows" of 50 to 75 feet, or thereabouts.

It must be admitted, however, that with Diesel powers of proven satisfaction, direct drive, at first consideration, appears to be the most simple form of propulsion. Fewer cylinders, fewer nozzles and fewer valves mean less attention and maintenance, so why add additional engines and electrical transmission, with its motors, generators, exciters, switchboards and attendant loss of power?

More careful analysis, however, reveals quite a different picture; but before studying it closely it is well to bear in mind that during the last five years tremendous progress has been made by American Diesel builders in the matter of increased speeds and reduced weights, and further advances are in sight, as was discussed in the June issue of YACHTING. Five years ago 600 r.p.m. was high! Today 2,000 r.p.m. is available! Tomorrow may see 3,000! Who knows? With engine speeds gaining so rapidly, propeller efficiency, in one respect, is dropping off, as the wheels must be designed to suit the engine revolutions, instead of being produced to conform with hull requirements. Naturally, a fast-turning propeller with a certain power behind it, cannot have the efficiency of a propeller turning at one-third the speed with almost the same power on the shaft.

Reduction gears meet this changing condition to an

extent, but they do not eliminate auxiliary engines and reversing mechanisms, and I am inclined to think that owners of pleasure craft will not be content to listen to the hum of gears. Also, in using reduction gears, there is the problem of some form of flexible coupling between the engines and propeller shaftings to be taken into account. As the result of intensive studies in test shops and in service, it has been the experience of the Falk Corporation, and of Blohm & Voss, that an unusually high grade of engineering is essential to achieve success with Diesel reduction gear drive in big powers, and that it cannot be undertaken economically by the average engine manufacturer.

Commodore Arthur Curtiss James' "Aloha" is one of the largest auxiliaries using Diesel-electric drive

With electric drive the propeller revolutions can be kept at a point best suited to hull form, draft, displacement, and required yacht speed, irrespective of the running speed of the engines. Thus, the absorption of 10 to 15 per cent power in the electrical transmission is largely offset by better propeller efficiency, and (when Diesel speeds get a little higher) by reduced displacement through a saving in machinery weights. The total power needed is about the same, as the two or three fair-sized auxiliary Diesels required by direct drive are eliminated with electrical drive. There is also quite a saving in cost, weight, and space in the way of air tanks and piping, as the only auxiliary unit required is a small emergency Diesel generator set for occasional use. To install the latter in duplicate entails no great expenditure, and one is sufficient.

In the case of direct drive for yachts there are needed one, two, or three main engines having six, eight or twelve cylinders each, with their integral air reversing mechanism, or reverse gears, maneuvering air tanks, etc., plus three auxiliary Diesels of two, four or six cylinders each. Incidentally, all auxiliary engines, to my mind, should be of the six-cylinder type in order to reduce vibration to a minimum. Up to now far too little attention has been paid to the auxiliary sets, their location and foundation, and too much attention given to attempting to cut down their cost. "Just where can I squeeze them in?" is the naval architect's thought. With direct drive they carry out a very important function, and should be purchased with the same care as the main units to ensure smooth running and freedom from vibration. High speed six-cylinder engines of small bore and stroke should always be installed.

At the recent meeting of naval architects in London, Robert Sulzer, the eminent Swiss Diesel builder, dealt with the matter of vibration. One instance cited by him was of a big yacht propelled by two 2-stroke engines, each developing 800 b.hp. at 150 r.p.m., which was absolutely free from vibration when proceeding at full speed. In harbor, however, when a small single-cylinder auxiliary compressor set was in service, the glasses in the saloon jingled. Many American yacht owners know from personal experience how one-, two-, three-, or four-cylinder auxiliary units sometimes will shake the boat, particularly if connected to the sides of the hull without adequate foundations, whereas the six-cylinder main engines usually operate with no vibration. So, if the auxiliaries can be eliminated by electric drive a point for that system is gained.

With direct drive there are cylinders and valves of two large main, and three smaller auxiliary engines to be taken care of, or five engines with from 20 to 30 cylinders altogether. With Diesel-electric drive only from two to six Diesels, having six, eight or twelve cylinders, are required, according to total power. These engines are of the non-reversing type, so are simplified in construction, needing no mechanical or air reverse mechanism, reversing being carried out by the electric motors on the stern shafts. As compressed air is needed only for starting, and not for maneuvering, tanks and piping are also simplified. In fact, I believe electric starters could be developed and air eliminated entirely with big engines, as they already have been for small engines. As the Diesels are not coupled to the propellers, they can be of much higher speed, making for more compact installation and layout in the engine room, especially as the two or three auxiliary Diesels and their cost and space are dispensed with.

With three to six main units there should be no vibration whatever. Also, they are small in size and weight as compared with the hull and with direct-drive engines. As stated, the only auxiliary units are one or two small Diesel emergency sets. When underway a little power drawn from each main engine can be used for all auxiliary purposes, such as pumps, lighting, heating, cooking, air-compressing, anchor-windlass, davits, siren, and battery charging. As there is an ample supply of current, electric cooking will make conditions in the galley more pleasant in hot weather. Furthermore, galley smells on deck are virtually eliminated. If sufficient storage battery power for all purposes when in port is not carried, one of the main engines can be started up and used for producing current. It may be well, also, to have a shore connection, so that land current can be used when desired. As most shore current is AC, and yacht current DC, a tiny motor-generator set in a corner of the engine-room would be handy for transforming land current to suit the yacht's equipment, especially for heating purposes when laid up for the winter.

Another outstanding feature of electric drive is pilot-house control. The navigator does not have to "bell" the engineer on watch, and wait for his response and action; but, by means of levers before him, can start, stop or reverse the propellers at any time without interfering with the rotation of the main Diesels, the speed of which

are governor-controlled. Shaking of the hull when the propellers come out of the water in rough weather is greatly reduced. This was a bad feature of the old type steam yacht.

What one actually does with electric drive, in effect, is to reduce the size and increase the speed of the individual main engines, and increase the number of cylinders and power of the auxiliary engines, converting them to main engines.

One of the largest American-built yachts recently placed in service is turbo-electric driven. It is my plan to outline what could have been done with Diesel-electric drive. Neither her owner nor her architects felt that satisfactory Diesels for direct drive could be secured today, and consequently turned to steam power.

She is a twin-screw craft of 2,712 tons displacement, 6,000 s.hp. and 18 knots speed. On trials the power developed at the propelling motors was 6008 shaft horsepower at 256 r.p.m. and the speed attained was 18.15 knots, so the design figuring was very close. Superheated steam at 295 lbs. pressure and 690 degs. (Fahr.) was used on the trials, as compared with the 300 lbs. and 200 degs. designed. So operating conditions are quite akin to those met with in Diesel operation, and call for just as much intelligence. Consumption of 3.7 cents per gallon fuel-oil worked out at 0.77 lb. per s.hp. hour. All her electrical machinery is AC, which costs somewhat less than the DC equipment used for Diesel drive.

Her machinery takes up 82 feet of the best part of the hull, and weighs, complete, 558 tons, including water in the boilers. Fuel capacity for 10,000 miles cruising radius is 589 tons, plus 200 tons water. More water would be consumed on such a trip, but condensers and evaporators take care of that. Thus, machinery, fuel and water aggregate 1,347 tons, or almost one-half of the total displacement of the yacht. Of the other half, the hull weighs 950 tons. I shall come back to these figures presently.

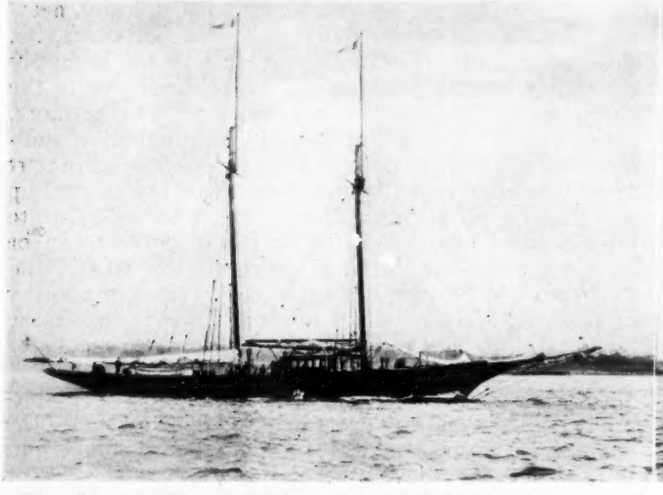
Through the courtesy of the Westinghouse Electric & Manufacturing Company's marine department I have been able to secure figures on DC equipment for a Diesel-electric yacht installation of similar power. For figures on Diesels to go with the installation I am obliged to take a hypothetical engine, based on somewhat slower speed, air-reversing models already installed with direct drive.

To obtain the same power at the propeller shafts as that installed in the turbo-electric yacht, approximately 7,800 b.hp. in Diesels would be required, making conservative allowance for the loss of power in transmission. To obtain the best balanced, vibrationless installation, well within the bounds of our leading Diesel engine manufacturers, I would advocate six 6-cylinder units, each developing 1,300 b.hp. at 900 revolutions. They would, of course, have to be custom-built and specially designed. As they would be non-reversing and airless-injection in type, their manufacture would be somewhat simplified. The speed may be considered high for engines of this power, but it is quite practical, although some builders may prefer to construct them as "straight-eights" or Vee-twelves — such as a modification of the Westinghouse-Beardmore 12-cylinder 12 inches by 12 inches locomotive Diesel, which develops 2,000 b.hp. at 900 r.p.m. with supercharging, or 1,500 b.hp. without supercharging. It is my personal opinion that engines of 2,000 b.hp. at 1,000 r.p.m. will be practical from an engineering aspect within a couple of years, provided the yacht owner's attitude is reasonably collaborative.

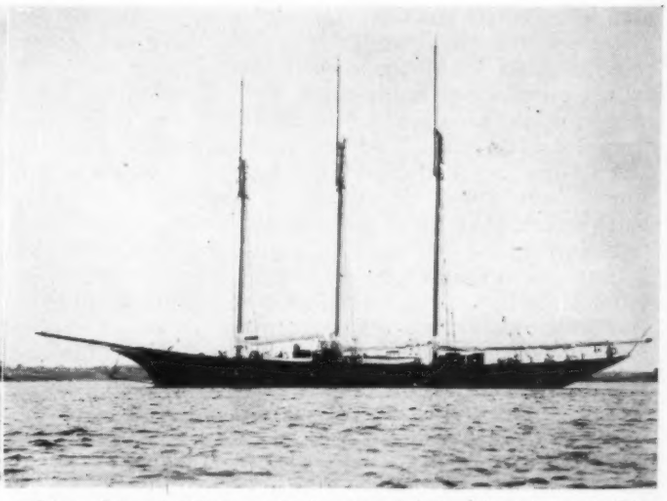
To play entirely safe today, however, a weight of about 40 pounds per horsepower for the proposed 1,300 hp. engines would be well within the limit of what has already been found to be practical. This would give an aggregate weight for the six bare engines of 156 short tons, to which must be added the weight of the generators, exciters, motors, wiring, switchboard and controls. This is 178 tons. Tanks, piping, batteries, pumps, cooling, toilet and drinking water, and fuel, would account for another 600 tons. For complete machinery weights this gives a total of 934 tons, or a definite saving of 413 tons over the turbo-electric installation, on the basis of a 10,000-mile cruising radius.

In case the yacht is laid up for the winter, and it is not desired to run sufficient Diesel power to provide heat, it may be desirable to install a small donkey boiler. But this would mean duplication of radiators, and the addition of steam piping throughout. The latter is not needed with electric heating. Since many commercial vessels with Diesel-electric propulsion have found it feasible to dispense with the donkey boiler, and as these and steam piping are a nuisance, a weight, and an expense, they may be eliminated in yachts.

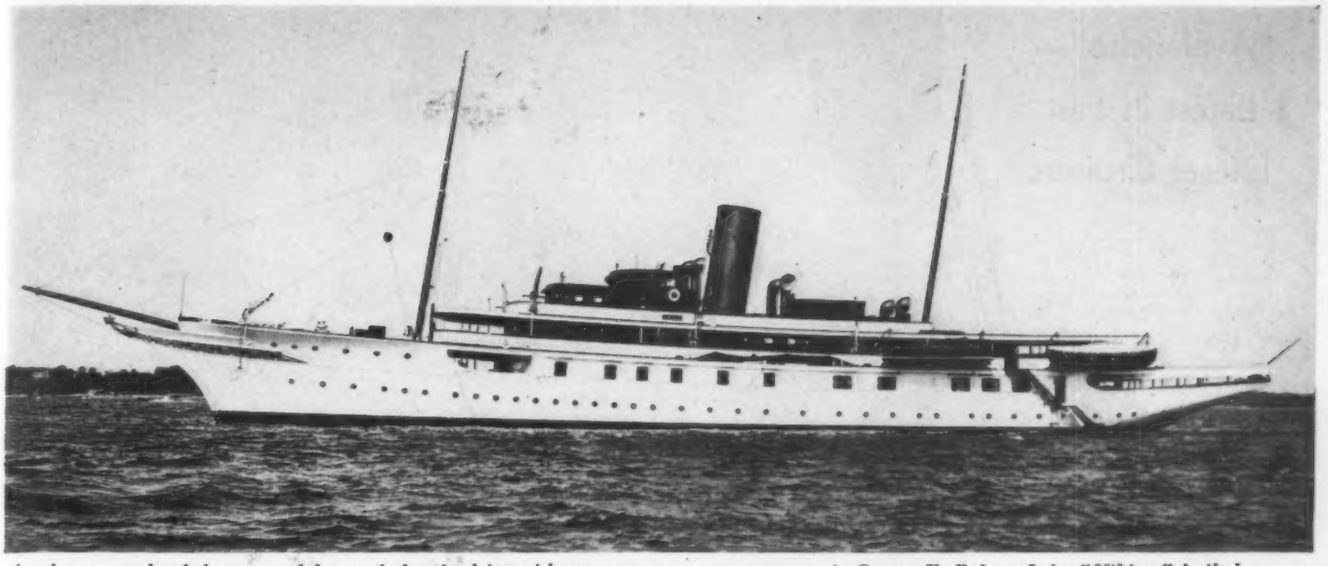
There exists a difference of opinion as to the desirability of eliminating the donkey boiler. On a large yacht a serious situation might occur if the supply of fresh water ran out, or if salt water got into the tanks, unless a



The schooner "Cutty Sark" (now the "Mary Pinchot") was one of the early auxiliaries to use complete Diesel-electric drive



Edgar Palmer's "Guinevere" demonstrated the value of electric drive in connection with Diesel power nine years ago



Another example of the successful use of electric drive with steam as a power generator is George F. Baker, Jr.'s, "Viking," built last year

small boiler and evaporator were installed. Also, doubt has been expressed as to whether or not sufficient heat is given by electric radiators for the warmth required when cruising in cold waters. This is a good point in the case of a direct-drive yacht where the auxiliary power is not sufficient to permit electric radiators of adequate capacity. The beauty of Diesel-electric drive is that there is ample current for all the heat needed. As for the fresh water question, one cannot have everything; to obtain certain advantages one has to give up others. However, this problem can be partly met by subdividing the tanks and duplicating the connections.

Next comes the matter of space. I already have shown that turbo-electric machinery needs an engine and boiler-room of 82 feet length by the extreme width of the hull, plus a space given over to a big cross-bunker tank. Fuel is also carried in the double bottom. I have omitted to mention lubricating oil for either craft. This is 4,000 gallons capacity for the steam yacht and would be 5,000 for the Diesel, and is carried in the double bottoms, except for the daily supply tank in the engine room.

Each of the proposed six main Diesels would be about 15 feet long, to which must be added 11 feet for the generators and exciters. To avoid disturbing the owner or guests by the light hum of the twin electric propelling motors, these would be installed in the after part of the engine-room, as was done with the turbo-electric yacht. For the Diesel job these are of the double-armature type to obtain a small diameter, and are 17 feet long.

The forward three engine-generators could have two engine-generator sets staggered between them for half their length, and the sixth engine set partly between the latter two. On either side of the rear end of the sixth engine would project the two propelling motors. This arrangement would give a very compact machinery layout, and would occupy about 65 feet, or 17 feet less than turbo-electric. This saving is sufficient to allow of two more cabins, each about 16 feet in length by nearly half the breadth of the yacht. With its lesser fuel consumption, no cross-bunker tanks are needed for the Diesel craft, giving extra space for the crew.

The next item to consider is that of first cost. The main engines, being of the non-reversing type, should be obtained for about $400,000 or less. This price would allow of semi-special design and a thorough testing. The electrical machinery, including pilot and engine-room controls, wiring, American Bureau inspection, etc., will cost about $136,000, giving a machinery total — exclusive of tanks, batteries, pumps, shafting, etc. — of $536,000 for a vessel that has a reported cost of $2,500,000.

Direct Diesel drive with reversing engines of 6,000 s.hp. at 400 r.p.m., plus 500 b.hp. in auxiliary Diesel-generator sets (total 6,500 b.hp.), plus certain extra and larger accessory equipment necessary, would also cost nearly $400,000, but would not give the yacht 18 knots speed, as the propeller efficiency would not be so good. It must be borne in mind that with the Diesel-electric drive quoted incorporated here, the propellers turn at 200 r.p.m. when the main engines are turning at 900 r.p.m. The propeller speed on the turbo-electric yacht is 250 r.p.m., so our Diesel-electric yacht will probably make 18¾ knots. To make 18 knots at 400 r.p.m. the direct-Diesel drive yacht probably will have to be of 6,750 b.hp., so that with auxiliary Diesel-generator units the aggregate power will actually be 7,250 b.hp. This has to be borne in mind when comparing costs. Hence, it is likely that such direct-drive reversing machinery will cost more than the $400,000 that I have quoted. This is a slant which is rarely given its true value.

I have no figures as to the cost of the turbo-electric machinery, but unquestionably it is somewhat below that of Diesel or Diesel-electric propulsion, although the fuel bill will be higher, and about three more men needed in the engine-room crew. The trial fuel consumption of the turbo-yacht showed good efficiency, which if maintained would mean a full-power oil consumption of 55 tons per 24-hour day at sea, and about 2 tons per day in port. The Diesel-electric yacht will consume 45 tons of fuel at sea, and almost nothing in port.

The electric drive for the quoted Diesel-electric yacht consists of two 3,000 hp. shunt-wound, separately excited motors of 500 volts and 200 r.p.m. speed. The six generators are 800 kw, 334 volt units, with 75 kw, 240-volt exciters.

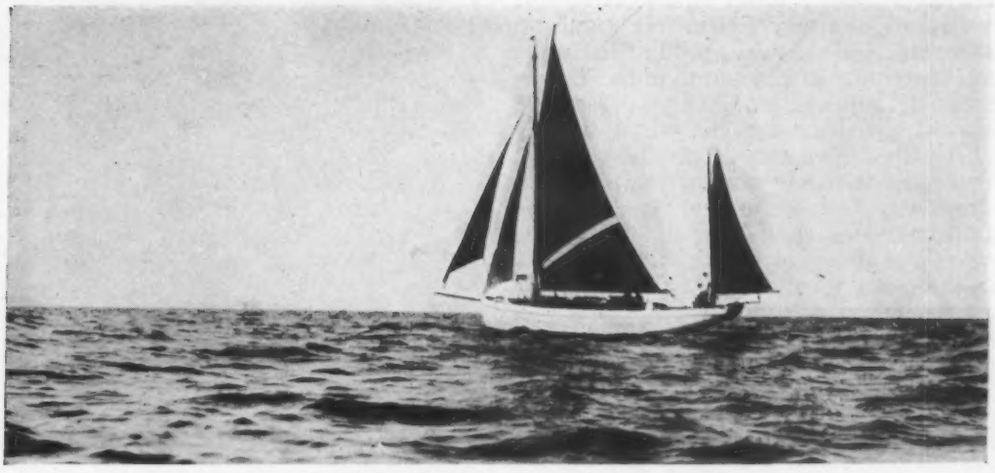
Now let us go to the other extreme in sizes of yachts and power. Say, a sturdy, moderate-speed cruiser that with direct Diesel drive would normally need about 175

(*Continued on page 112*)

"Avalanche"—Latest in Fast Diesel Cruisers

The recent development of the fast Diesel cruiser is exemplified in "Avalanche," designed by Tams, Inc., for Anson W. Hard, New York Yacht Club. Well proportioned, with an easily driven hull, she is extremely pleasing to the eye, and her accommodations leave nothing to be desired. These latter include a large dining room, a saloon, and a smoking room, all on deck, and one double and five single sleeping cabins below

"Avalanche" is 154 feet in length, by 24 feet beam. She was built by the Consolidated Shipbuilding Corporation. Of steel construction, she is built to the highest American rating. She will make 17 knots with her two Winton Diesel motors of 1200 total horsepower. "Avalanche" will be seen at the races for the America's Cup this month



"Day Dream" is an auxiliary yawl 48 feet in length

A Transatlantic Passage in a 48-Footer

Part I—From Devon to Tangier, Across the Bay of Biscay. Ashore on the African Coast

By J. H. P. CAMPBELL

"*DAY DREAM II*" is an auxiliary yawl of 18 tons gross register, 48 feet long over all, 36 feet on the water line, with a rounded bow and counter stern, and 12 feet 2 inches beam. She draws six feet of water. Her engine is a 40 h.p. Gleniffer, six-cylinder, starting on gasoline and running on kerosene when warm.

We, that is, Philip Merton and I, found her as the reward of a long and discouraging search, at the yard of her designer and builder, David Hillyard, at Littlehampton, England. She became our property early in 1929, was tried out during the summer, had extra water tanks and a squaresail fitted, and at the end of last August we were all stocked up and ready to sail from Brixham, bound as we then planned it, on a Mediterranean cruise. The Transatlantic passage was an afterthought. We secured two lads, sons of a Brixham trawler skipper, as crew, one as a deck hand and the other as cook.

When, on a bright sunny morning, we slipped our moorings at Brixham on September 7th and set sail there was no more than a draft from the east, so we had to motor around Berry Head before we picked up a light easterly breeze. This took us around Ushant in the afternoon of the following day, very conveniently backed to northwest, and blew us right into Camaret Bay, a pleasant little fishing port from which we had decided to start across the Bay of Biscay.

Two days later we were off at nine, again with perfect weather and a light N.E. breeze. But we had not been going an hour before a dense fog came down on us, blotting out everything and soaking us to the skin. First the rocks off the entrance to Brest roadstead had to be cleared — reefs which run twenty miles out to sea among which the tide runs at anything up to five knots. When clear of these we were on the main track of shipping bound south from the English channel. We could hear the foghorns going all about us, sometimes so close that the helmsman would be startled almost off the wheel box, but we never sighted a ship.

The fog lasted two days, the second of which was flat calm. After this we picked up a fresh breeze from the north, veering gradually to northwest. Early in the morning of our fifth day out we sighted Cape Villiano, rounded Cape Finisterre, the northwestern corner of Spain, with the breeze gradually dying, and at 3.00 p.m. anchored in Muros Bay after a rather uneventful run.

A couple of nights of rest, a new stock of fresh provisions, and we were off again to Vigo. We skirted the lovely wild coast under power in a flat calm, averaging six and a half knots for the run, and anchored off Vigo in the afternoon.

On September 19th we took advantage of a fresh northerly breeze that was too good to miss for the run to Oporto. The distance being eighty miles, we did not get under way till 4.00 p.m., so as not to arrive before daylight next morning. We slipped out of the Ria de Vigo under all plain sail, past the wreck of the steamship *Highland Pride*, which had run on the rocks in a fog a fortnight before. Once outside, the wind freshened so that in spite of lying-to while we had dinner, and running under greatly reduced sail, we arrived off the mouth of the Douro River just as day was breaking. Our signal for a pilot was soon answered from the signal station, but as no pilot arrived within an hour and a half, we started the engine and followed a tug and her barge across the bar on which the seas were breaking heavily. The pilot met us inside — the only difficult part of the entrance being past — and for a great price and many cigarettes for his crew, directed us up the river to a berth alongside a tug.

Oporto we found rather uninteresting, but we met here for the first time a German Marconi-rigged ketch, the *Gorch Fock*, amazingly ugly, and, as we found afterwards, extremely slow. She had aboard a very charming family, father, mother, two small children, a young Polish girl, and two paid hands. This party was bound for Ceylon by easy stages.

Three days later we were off again in company with

the *Gorch Fock*, and in many kinds of northerly and easterly drafts flapped our way south. We made an uneventful passage to Cascaes, a delightful little fishing village and summer resort near the mouth of the Tagus, where we anchored 48 hours later. Here we passed the time very pleasantly, waiting for the wind, till the evening of the 27th when we got underway beguiled by a pleasant little breeze from the northwest. This soon petered out, however, and again we fanned along slowly, taking 36 hours for the ninety miles to Cape St. Vincent, which was abeam at midnight.

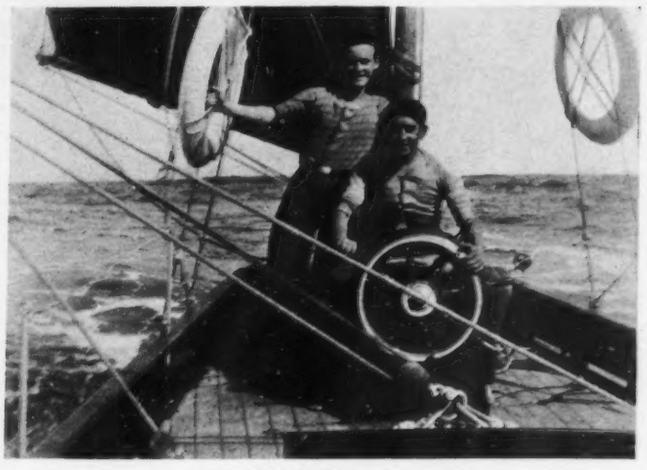
On rounding the point we ran into a fresh easterly breeze which rapidly increased in force and knocked up an unpleasant sea. We stowed the mizzen and jib and made very poor headway, being knocked off to leeward by the seas. The easterly wind lasted throughout the day, moderating a little at noon, so we put into Portimao where we again met the *Gorch Fock*. She had gone on past Lisbon, met with a bit of a dusting off Cape St. Vincent, and had taken shelter in Portimao.

October 1st, some three weeks after we had sailed from England, found us underway for Cadiz, where we spent a few days and saw a bull fight, and from there we sailed for Tangier, across the Strait of Gibraltar. Both passages consisted of drifting along pleasantly before northerly breezes, and were uneventful. We finally made Tangier Bay under power, anchoring off the inner breakwater at eleven on October 8th.

On the morning of the tenth the wind, which had been light northwest, shifted to northeast, leaving us completely exposed at our anchorage. We had not yet seen enough of Tangier, this being our first taste of Africa, but it was imperative that we get underway. So we decided to sail for Gibraltar. At 10.00 a.m. we got our hook aboard and stood out into the strait under all plain sail, but within ten minutes we had to take a board back, stow the mizzen and jib and take a reef in the mainsail. Half an hour's beating back and forth convinced us that we would not get very far on our way towards Gibraltar, with the wind still increasing and kicking up a steep sea aggravated by the tide rips off the headlands. Accordingly, we stood in under the lee of Malabata Point, the northeast corner of Tangier Bay, for an anchorage off a sandy beach about a mile south of the point, recommended by the pilot book for small boats, and sheltered from easterly gales. A Spanish felucca, or lateen-rigged fishing boat, was already sheltering under the point. We sounded our way into five fathoms, rounded up into the wind and let go the anchor. Then things began to happen.

At the moment the anchor went overboard an extra heavy puff swirled around the point from the north, filled our sails and sent us charging ahead. We paid out 15 fathoms of chain but the anchor never took hold for a moment, though the drag on the chain was sufficient to hold it up against the keel and make it impossible for us to come up head to wind. In what seemed like a few seconds, which hardly gave us time to realize what was happening and let go the halliards, we sailed right on to the beach and were swept by the swell broadside-to in about four feet of water just where the seas were breaking.

As the mainsail came down a sea broke into it, splitting it from leech to luff. I got the motor going, but of course we were stuck much too firmly for it to move us, and it was put out of action almost at once by the water that forced its way through the skylights. We hoisted a distress signal and fired shots. The Spanish felucca at once got underway and sent her boat in with a rope, which appeared to be too short. Philip



The deck hand, and the cook

and our crew managed to get out to them in the dinghy with a rope which was made fast to theirs. But as the rope parted several times they failed to move us. Meanwhile, Philip and the boys were given dry clothes and coffee by the Spaniards.

A troup of mounted police soon arrived on the beach in charge of a very charming and obliging Spanish officer. I waded in to him with the ship's papers, of which he offered to take charge, and he told me that a tug was being sent across from Tangier at the instigation of the British Consul-General and Lloyd's agents. He posted two of his police on the beach at our disposal, in case we wanted messages sent into town, and went back to investigate the question of the tug. The crew of the felucca then came in in their boat with our two boys, leaving Philip and our little dinghy on the felucca.

In spite of the difficulty of making ourselves understood, we got them to help pump out the water and then lay out our extra big anchor. They did not dare go through the surf with the weight of the chain in addition to the anchor, so a double length of new rope was used instead. We then discovered that a porthole had been stove in on the *Day Dream* and we were still taking a lot of water. This was blocked with sacking and the ship pumped again till the strainer and pump were so blocked with articles which had come adrift in the frightful bumping and rolling, that they could no longer be cleared.

By this time *Day Dream* had dug a grave in the sand and was not bumping much; the tide had receded so that the seas were breaking further out and we made very little water. We tried to turn her head to the sea with the anchor we had laid out, but were able only to bring her round an inch or two at a time. By keeping a continual strain on the anchor rope, however, we did bring her round by 6.00 p.m.

Meantime, the Spanish police officer had come back with Lloyd's agent, and the British Vice-Consul, who brought us a basket of food and water. It appeared that the French port captain had insisted that he could not get within 400 metres of us in the tug, although the skipper of the tug was quite willing to take her in much closer. They had not enough length of hawser to reach that far, and obviously delayed about getting it till the Consul and Lloyd's agent guaranteed to pay half the value of it in addition to the towage charge. It was finally arranged that the hawser should be secured and we should be pulled off at high water in the evening, which would be at six thirty.

When the time arrived the Spanish fishermen took

me out to the tug to arrange matters, but by that time they had had enough of it and sailed into Tangier with Philip and our dinghy, leaving me with no means of getting back to the *Day Dream*. The new 400-metre hawser was made fast to the tug, and Lloyd's agent and I got in the lighter from which the hawser was paid out as the lighter was towed in by a motor launch. When the four Moors manning the lighter could touch bottom with their sweeps, the launch let go, but the men were quite unable to move the lighter against the wind and were at once blown back and out into the bay.

By this time it was dark, so the attempt was given up for the night and I was taken, willy nilly, into Tangier with no money, no dry clothes and no shoes, leaving the two boys, who did not know what was happening, still on board *Day Dream*. On the wharf I met Philip, in similar plight. Lloyd's agent took charge of us and bought us some shoes, booked rooms in the hotel and took us around the bay in a taxi as far as the road went in the direction of the *Day Dream*. From there, led by a Moor with a lamp, we scrambled over rocks and along beaches for three miles. Philip waded

Tangier, as seen from the sea

out to tell the boys to come off with us, and we all went back to Tangier, getting to the hotel about midnight.

The next morning at five we were down at the port where we had arranged to meet the port captain and make another attempt to take the hawser ashore. After waiting about for an hour and a half the expedition finally set out from the harbor. It consisted of the tug with the port captain, and sub-port captain, both French, Lloyd's agent and ourselves, and an assorted crew of Moors, Spaniards and Jews. Then came the lighter full of hawser, manned by more Moors, an indefinite number, all sheltered under the thwarts and hawser except the helmsman, who swore blue murder and cursed the skipper of the tug in five languages as he was deluged by spray from each successive sea. The rear was brought up by the motor launch.

The tug was anchored and we all transferred to the lighter, which was towed in by the launch, this time carrying in all the hawser with us. The man power was just sufficient this time. We climbed on to *Day Dream's* bowsprit with the aid of a rope, secured the hawser and the lighter was towed back to the tug. As the strain was taken, *Day Dream* slipped off almost without a shudder, and we cut our anchor rope, which we had buoyed, and started running down towards the tug at a great rate under bare poles. The problem of shortening in the hawser without taking several turns with it around our keel then presented insuperable difficulties to our French port captain. When he finally started to tow us back and sideways into Tangier we decided it was safer to let go the cable and run into the harbor under our staysail, which we did. We dropped two anchors out ahead and warped our stern into the wharf and spent the rest of the day lodging a protest before the Consul, trying to arrange for repairs, and getting some clothes ashore to be dried.

It appeared at first that we could be hauled out on the slip and have all the necessary repairs made at Tangier. A Levantine Italian came aboard with his mate to fix the bilge pump and broken porthole. We were rolling very heavily in the inadequate shelter of the harbor, so the Italian, after going below into the engine room, emerged in about five seconds and demanded that we put him ashore at once. His mate, however, was made of sterner stuff and, although he left his immortal soul in a bucket in the engine room, succeeded in detaching the pump, taking it ashore for repairs. The porthole we had to unscrew and send after him. The sail was also repaired by a bearded cut-throat of a Moorish fisherman.

The hauling up attempt, after weeks of delay waiting for a high spring tide which did not fall on Sunday, or a Roman Catholic, Jewish or Moorish festival day, proved a complete failure. We had to take all our ballast out in order to float on to the slip. Even so, we had only about a centimetre to spare. All this work was wasted, as the sub-port captain who was to direct operations arrived three quarters of an hour after high tide. Fifty odd Moors managed to pull us on to the slip, but the authorities had not thought of shoring us up. In spite of our shouts of protest, which no doubt were inaudible in the general mêlée, they started to haul us up and only desisted when we were almost on our beam ends. They were unable to pull us off, so it was left to the two of us to haul ourselves off with the windlass.

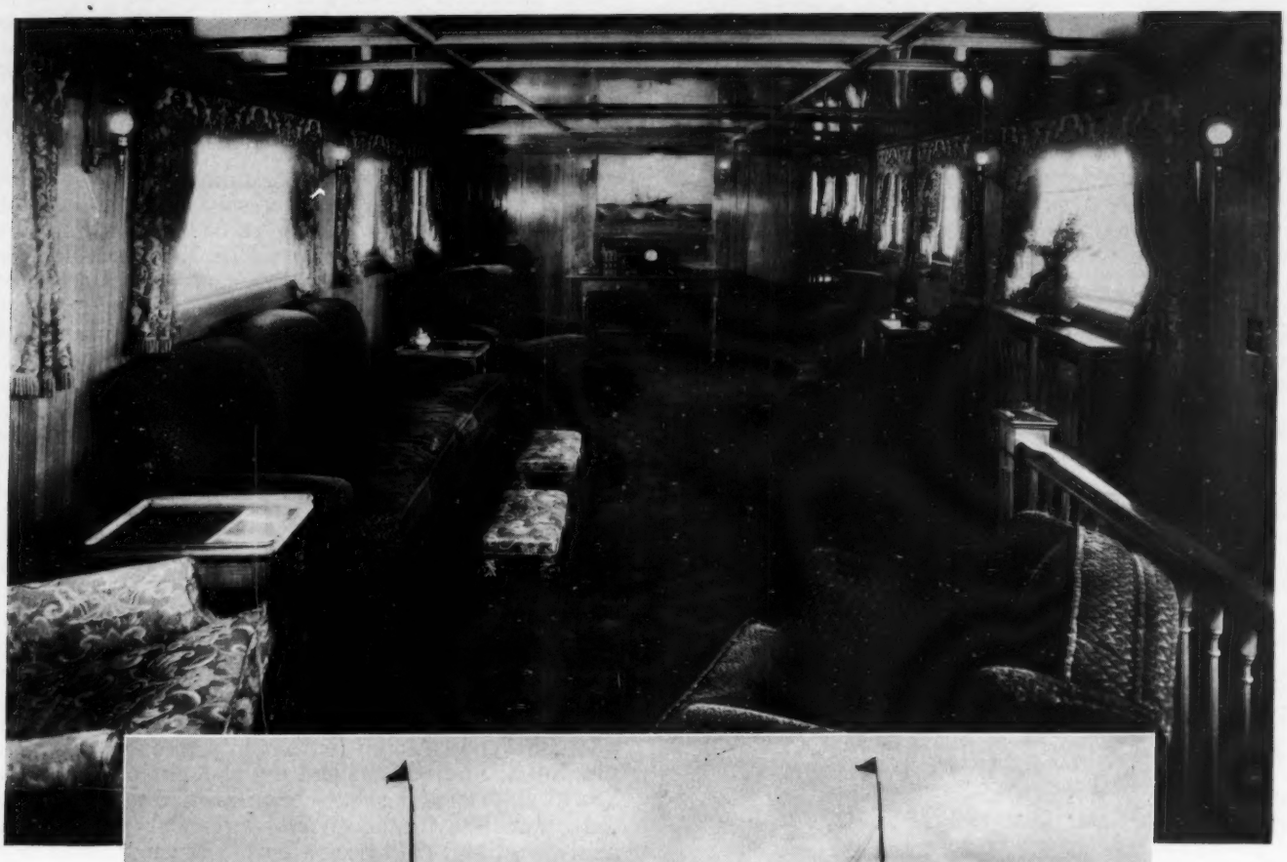
After this we decided it was too dangerous to fall into the hands of the port captain and his minions, so in a deluge of rain and a strong westerly wind we were towed to Gibraltar, where we had all the necessary repairs done quickly and efficiently at the Royal Naval Dock Yard.

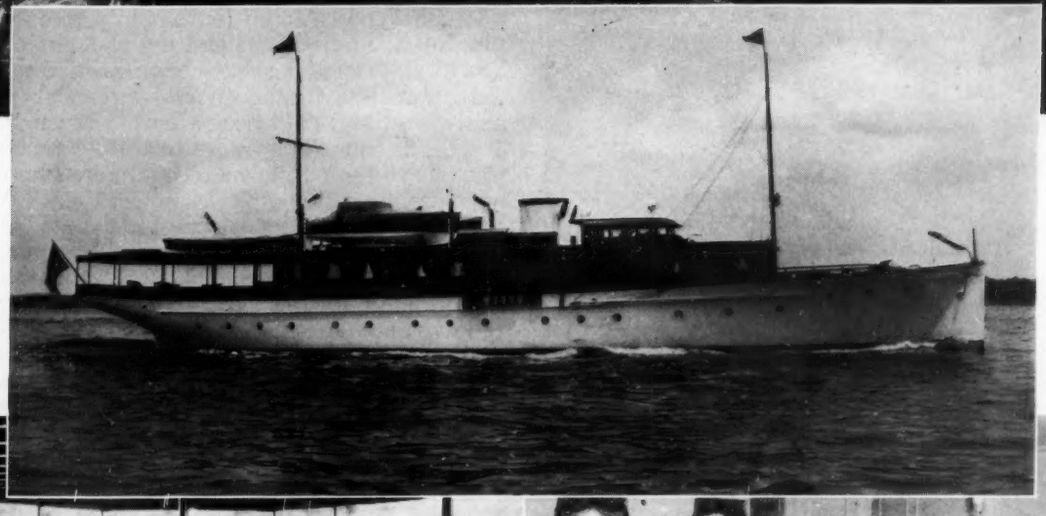
Apart from damage to our gear from the bilge water, we were almost unhurt, and after tightening up the keel bolts, caulking a few seams, and giving *Day Dream* a coat of paint and varnish, we were ready for sea. Meantime, we had taken the opportunity of rigging the squaresail to its present form to overcome certain troubles we had had with it on the voyage out.

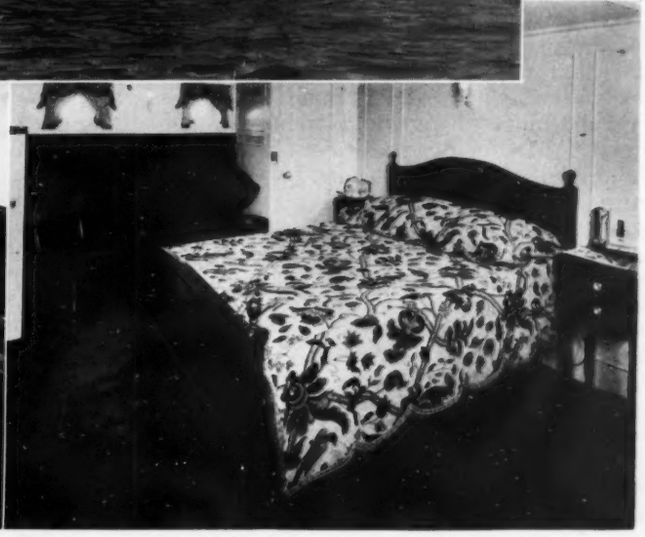
(To be continued)

A lateen-rigged sardine boat at Cascaes

"Koranette," A New 105-Foot Power Cruiser







"Koranette" is the latest of a long list of yachts owned by Commodore F. B. Hower, of Buffalo, N. Y. Designed and built by the Luders Marine Construction Co., of Stamford, Conn., she is intended for service on the Great Lakes as well as on the Atlantic seaboard. This meant keeping the height of the deckhouses low enough to pass under the bridges of the State Canal, and the superstructure has been carefully streamlined to meet this requirement and, incidentally, to enhance the appearance of the yacht. "Koranette" is a powerful craft, roomy, and able. She has a cruising speed of 12 knots with two 6-cylinder Winton Diesel engines of the latest model

The Damnedest Cruise!

Part II—A Modern Odyssey

By JOHN T. ROWLAND

IT WAS not quite one o'clock when we reached Whitehall, so we looked forward to a good run in the canal that afternoon. It was therefore disappointing to be informed that we must wait until an inspection party consisting of the governor and his staff had locked through. However, we settled ourselves to accept this slight delay as philosophically as possible, never dreaming that we should be tied up in the dirty forebay the entire afternoon. Such proved to be the case. We finally got into the canal after dark and tied up, mosquito-bitten and disgusted, for the night.

The permit to pass through the canal with an outboard motor had been granted in consideration of my statement that I was an experienced boatman and would not allow the *Lorna* to become a source of nuisance and delay in the manipulation of the locks. It was gratifying, therefore, to have the motor respond nobly when called upon for duty the next morning. The only thing which marred that day's run was going aground on a pile of sawdust and shavings in the middle of the ditch. The stuff was so soft that full-powered boats probably slugged right through it. We got overboard and shoved the *Lorna* off, only, however, to strike again a hundred yards further on, and this stranding cost Jim his glasses. In his wrath he dove overboard with them on.

We negotiated about half the canal that first day, and on the following afternoon got down into the canalized Hudson River. We were steaming along gleefully, when with no warning whatever the motor started racing again.

"Shearing pin gone again," muttered Jim. "I was afraid that soft copper wouldn't last long."

But to our dismay the autopsy disclosed a broken shaft. It was a defective casting and had been holding together by just a small segment. Said Jim: "The damn thing might have lasted just a few miles more." But they never do.

"Just as 'Lorna' got to the gate the barge surged ahead and squeezed us between its bow and the wall"

We were in a most ridiculous plight, having no means of propulsion and no way of getting ashore (except swimming) as the water was too shallow to approach the bank. We had already drifted out of the main channel and were obliged to anchor in order to keep from going aground. Power boats and yachts were continually passing out in the channel, their crews responding with jovial waving to our frantic signals for help. It looked as if the *Lorna* might sit there till we starved or came ashore on the ice. Of course, it was foolish to tackle such a voyage without a dinghy. In defense, I can only say that I had a perfectly good one at home and was not minded to spend fifty dollars for any of the weird contraptions offered for sale along the way; also, on a trip like this, one figures, generally, on going alongside a dock. Heaven knows, there were plenty of these, but the problem was to get to them.

In this predicament Dr. A. B. Allen proved the good Samaritan. We had made his acquaintance the day before in a lock, and had fortunately started off ahead of him that morning. He brought his power boat alongside and took us in tow as soon as we told him our sad story. Not only that, but he towed us through the rest

of the canal and would probably have taken us down the Hudson if we had let him. But I insisted upon being dropped at the Albany Yacht Club, from which point we intended to pursue the voyage under sail.

Jim and I went briskly about the business of rerigging, only to learn that there were no facilities for stepping the mast. I tried to get a launch to tow us up to the Barge Canal Terminal, where I could see a crane, but they all asked far too much. In the end a young actor and his wife, who were cruising northward in a converted lifeboat, gave us a lift in exchange for our Ford-tire fenders and a lot of advice. I hope it helped them get through!

By this time we had become pretty handy riggers and it took only a couple of hours to get *Lorna* ready for sea. Most of the day had been wasted, and we were eager to get off and make a start down the Hudson River, for the wind was blowing fresh and fair out of the northwest and we had now nothing to depend upon except our sail. In fact, it was blowing more than fresh in the puffs, and we had a lively time maneuvering among the shipping in that narrow river while waiting for the drawbridge to open, with a strong ebb tide setting us down. We could see a steady stream of vehicles passing over the bridge, and though we signaled it repeatedly no sign of acknowledgment did it give, so we came to the conclusion that a mere sailing vessel was out of luck. I think we sailed about 30 miles that afternoon, back and forth between the two bridges. At last, as night was coming on, it opened for the Hudson River day boat and we shot through, hurling imprecations upwards as we went. As Jim remarked, the only pity was we didn't have a gun.

Our nerves by this time had suffered somewhat from attrition, for on the previous day a lock captain had done his best to sink us in the canal. He ordered us out of a lock, the entrance to which was partially blocked by a huge barge. Just as *Lorna* got to the gate the barge surged ahead and squeezed us between its bow and the wall. I saw my little boat's sides compress several inches and was waiting for the sharp crack of broken frames, when I intended to climb that wall and throw the lock captain into the canal if it was my last earthly act. Jim had his eye on the bargees, and I felt confident he would do his full duty by them. Luckily for all, the barge surged back again and we squeezed through. "Squeeze" was the word. Jim and I relieved our minds so freely that we rather expected to be arrested at each succeeding lock, and were somewhat surprised and disappointed when they let us through.

This sort of treatment is the direct result of allowing yachts to use the canal without charge. They have no rights, and the lock captains know it. This is an outrageous attitude for a state to take towards its citizens, and it should be remedied at once. If pleasure boats are to be allowed use of the state canal system they should be given the same guarantee of fair and careful treatment as commercial craft. Not only property rights but personal safety demand it. And there is no reason whatever why we should not pay a fair toll charge for the privilege of using the canal, particularly now that its principal use is by pleasure boats. We want it and we are willing to support it, but we do not want to go through at risk of being sunk without redress.

I had been a little anxious about the Hudson River, fearing a steady sequence of typical August days with light southerly winds, which might prolong our voyage indefinitely. If one has to be a Flying Dutchman, forever beating to windward but getting no further on, one would rather do it somewhere else than between the walls of even this very beautiful stream. To our delight, therefore, we found the northwest wind continuing fresh and fair. We sailed till midnight and started again early in the morning, pursuing a boisterous way and pursued, in turn, by gusty squalls. We passed Dr. Allen while he was at anchor and it was not until the following afternoon that he caught us up. The breeze dropped us at last in the big bend off Rhinecliff, just in front of Jacob Ruppert's pier. There we had to anchor, to avoid going back north with the flood tide. We had been so constantly on the jump that we had paid little attention to the ship's larder, which we now found to be practically empty. The satisfaction of having run half the length of the Hudson River in one day was offset somewhat by the depleted condition of our stomachs. There was no town — only great estates bordering the river as far as one could see — but needs must when hunger pinches, so I determined to take a chance.

My appearance was not such as to inspire confidence or respect, and it did not surprise me greatly when Col. Ruppert's watchman took me for a tramp. I flashed a ten dollar bill, told him I had landed from a yacht, and asked for the Colonel, but was rather relieved to be told he was away. It would have been our first meeting. A pack of assorted dogs appeared and I felt gratified that they had not appeared sooner.

The watchman still eyed me askance, but took me doubtfully to the superintendent's house. There I unconsciously did a very bright thing. I called up a friend at Vassar College, and this conversation seemed to convince the superintendent that my social standing was better than my appearance. I was treated with great kindness, loaded with all the comestibles I could lug, and sent back as far as the dock in the plantation Ford. Jim greeted me with the expression of a hungry pup.

We lay at anchor that night inside a sand shoal on the east shore, and were thankful for such protection as it afforded from the swells kicked up by the Hudson River boats. These are such as to wreck a craft like the *Lorna* if they caught her lying at a dock; and since the railroad lines were permitted to cut off all the natural harbors along the river by building their trestles across them, it follows that a small vessel is distinctly out of luck. There is not a single good anchorage left along the entire navigable length of the river except the creek at Catskill (too small for any but little boats) and the elbow below Rhinecliff, at Governor Roosevelt's estate; yet there are any number of charming natural inlets which it is impossible to enter on account of the tracks. Well, it is too late to change that, but some of the more progressive towns might help matters by building artificial shelters where a small boat could lie.

Morning found us engaged in a luffing match with the red spar buoy on the tail of our shoal. We gradually gained on it and progressed by inches downstream against wind and tide. It took the whole morning to do the three or four miles to Hyde Park, and then, in a gorge-shaped channel between high hills, we caught the first of the ebb and a breeze that freshened, with heavy squalls blowing straight up from New York. It was a dead beat and we slammed the poor little *Lorna* into it, one moment becalmed and the next lying on her beam ends. It was exciting and sportive, but most of our progress was due to the tide. At last we saw the Poughkeepsie railroad bridge looming through the mist and on the east shore an attractive looking dock. Tired, hungry and disgusted — we had worked hard since dawn and made just nine miles — we ran her in and

rounded up to the end of this dock. A man in blue overalls lounged on its end looking like a guard of some sort.

"Do you mind telling me what place this is and whether we may tie up here for the night?" I called.

"I guess its all right fer you fellers," he replied; "this is the State Hospital for the Insane."

"By Gosh," said Jim, "we've come to the right place at last!"

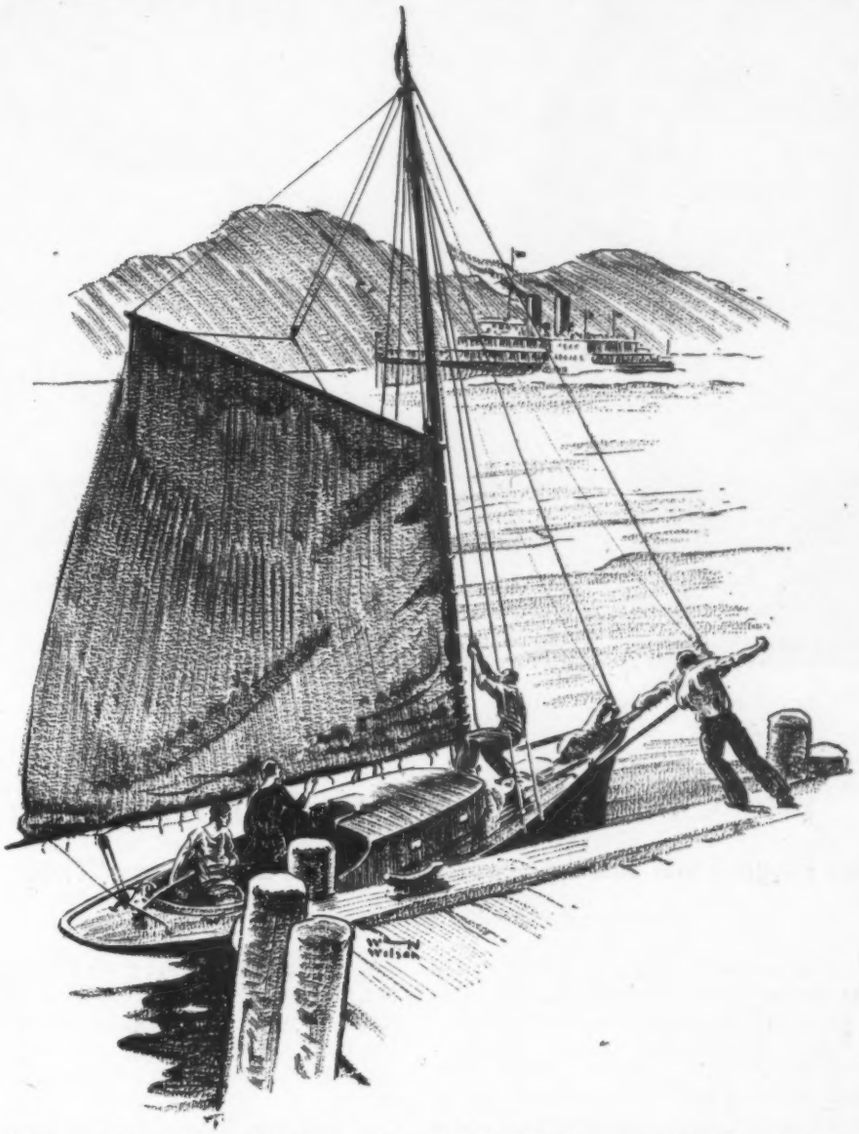
By this time it had begun to rain hard. We were grubless, heatless, and wet — and the city of Poughkeepsie was still several miles away, dead to windward and too far to walk. I positively tottered when I got ashore. In this sad fix we called up two friends who were doing summer-school work at the college and they took mercy on us in our extremity (which is no metaphor) and came up with assorted food and a car in which to carry us to town.

I had discovered that it was too shallow for *Lorna* to lie anywhere except across the end of the dock, and just as we were about to depart and leave her there Jim spied a huge river steamer coming boiling up the creek. We knew what that meant. Jim was on the dock; the two girls and myself were on board, where I had been pointing out the beauties of my ship as well as the driving rain would permit. I let out a yelp and hoisted the close-reefed mainsail (we had been too tired to turn out the reef, and wasn't I glad!) while Jim cast off the shore fasts and gave her bow a shove out with a long pole. Her sail filled and next moment *Lorna* was scooting out into midstream with two rather startled and greatly mystified young ladies on board.

"It's all right," I panted; "I'm not trying to kidnap you; merely to save the boat from being wrecked."

Lorna ran over the steamboat's huge bow-wave as though it had been an ocean swell. I put her about and followed it back towards shore, and when it struck the pier the girls saw very clearly why I had not left my boat there. That wall of water would have smashed her flat.

So here was another problem — more steamers might pass while we were away. I solved it by carrying out an anchor and hauling her out on that with a stern line to the dock. It looked all right, but when Jim and I returned a couple of hours later we found that the anchor had dragged and *Lorna* was snuggling against the dock again, held by her stern line alone. Fortunately, no steamers had gone by. We left the dock entirely then, anchored, and turned in, to wake about midnight, aground and half a mile upstream. We were right on the edge of the shelf, where the bottom pitched from zero feet down to more than the leadline would reach. However, it was a rising tide, so we cussed a little and went back to sleep. By this time I did not greatly care if she sat on the railroad track itself.



"I let out a yelp and hoisted the close-reefed mainsail while Jim cast off the shore fasts and gave her bow a shove out with a long pole"

Morning found us afloat, but only because it was high tide and the anchor had hooked into a rock, for it was blowing hard out of the northwest and our stern was not more than a good jump from the beach. We got under way at once and started our most spectacular day's run — one which was destined to carry us 70 miles down the Hudson River to New York itself. Some of you may remember that Sunday of high nor'west wind in August. Our good friend Dr. Allen, who was ahead of us, got such a dusting in the middle of Haverstraw Bay as nearly to lose his boat. In the Highlands of the Hudson it was great stuff. We ran some of the time under forestaysail and for a couple of hours under bare poles. That was after the close-reefed mainsail jibed quite without warning, and carried the backstay away. I have seen it blow harder, but never from so many directions all at once. But when we got down almost to the city the wind died entirely and it took us half the

(*Continued on page 116*)

Photos by M. Rosenfeld

"Thisbe," sailed by her owner, William P. Barrows, won the Canada's Cup on Lake Ontario after a close match with "Quest," sailed by Norman Gooderham

The Canada's Cup Stays at Rochester

A Close, Hard Fought Series on Lake Ontario Between the Eight-Metres "Thisbe" and" Quest"

By CHARLES A. RAWLINGS

THE Canada's Cup got a rousing revival off Rochester, on Lake Ontario, the week of August 11th. *Thisbe*, a Crane-designed Eight-Metre, raced last year on Long Island Sound, defeated *Quest*, a new boat by Fife built by the Royal Canadian Yacht Club, of Toronto, and held the Cup for the Rochester Yacht Club. The series went to five races and proved to be a rip-roaring melodrama full of thrills up to the final curtain.

The trophy is fresh water's Holy Grail. It was first put up in 1896 by a group of Toledo yachtsmen as a prize for a "two out of three" series between a Canadian and a United States boat. *Canada*, a Fife cutter from Toronto, won the two first starts.

With sportsmanlike spirit, the Canadian yachtsmen who won it deeded the cup to the Royal Canadian Yacht Club, as trustees, to be held for international competition between clubs affiliated with the newly formed Great Lakes Yacht Racing Union, and in 1899 *Genesee*, of Rochester, sailing for the Chicago Yacht Club, beat *Beaver* of the Royal Canadian Club, off Toronto, in three straight races and the Cup went to Chicago. In 1901 the *Invader*, of Toronto, brought it back to Canadian soil when she defeated the *Cadillac* of Chicago, three to one.

Rochester brought the Cup across the lake with *Irondequoit*, beating the Toronto cutter *Strathcona*, three to two, in 1903, and successfully defended it with *Iroquois*, three to two, over *Temeraire*, in 1905, and with the famous *Seneca*, three to nothing, in 1907. Since that date, 23 years ago, the trophy has rested in the Rochester club's case, getting a weekly dusting and waiting for the challenge from Canada that opened the recent series.

It is a proud old Cup, and upon the lakes the sailors, Canadian and Yankee, look on it with a great deal of awe.

A Metre Boat Program

The challenge was part of a program of Commodore George H. Gooderham of the Royal Canadian Club to establish the International Rule on Lake Ontario. Eight-Metre yachts, fitting into the measurement stipulations of the deed of gift nicely, were named. Rochester built two; one by Frank C. Paine, *Cayuga*, and the other, *Conewago*, by Olin J. Stephens, and bought the year-old *Thisbe*. Canada built three; the *Quest*, designed by Fife and built at Oakville; the *Vision*, designed by Nicholson and built at Gosport, England; the *Norseman*, drawn by Roué and built at Toronto.

Thisbe proved best at Rochester and W. P. Barrows, her owner, was elected to sail with Theodore Pickering, John Taylor, Taylor Howard, Ted Moline and James Snell, as crew. *Quest* was Canada's choice, with Norman Gooderham as skipper and Douglas Addison, Jack Bartlett, Walter Windeyer, Robert Jarvis and a professional, as crew.

The series started August 11th with Rochester very much excited. A public subscription had built *Cayuga*. The Rochester press has the sport of yachting very close to its heart and public interest was aroused as it had never been before over sail boats. It is estimated that an average of 5,000 persons were afloat or standing on pier heads each race day. It was nearer 10,000 on the final day. Clifford D. Mallory, President of the North American Yacht Racing Union, was the neutral judge. Charles Van Voorhis represented Rochester, and Harry A. Moore, Canada.

"Quest's" loose-footed, perforated spinnaker pulled the challenger along like a house afire whenever there was wind enough to fill it

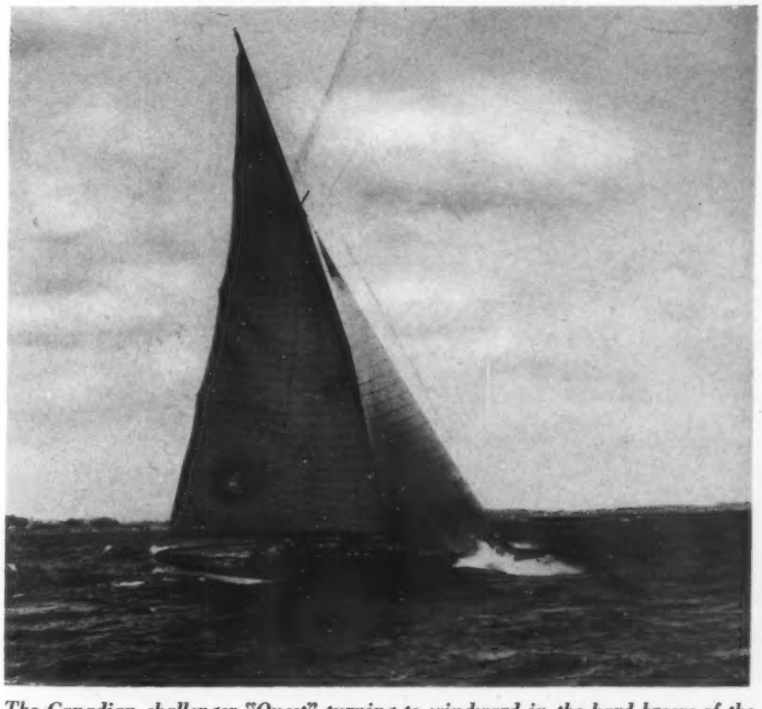
Sea and Wind

The racing started in a twenty-mile nor'-wester with a big lump of sea. It continued for the five days with a different sample of weather every day and there was action a-plenty in every race.

Thisbe is a fair example of the American interpretation of the International Rule in Eight-Metre size. *Quest* is supposed to be an improved *Caryl*. Out of the water their differences were striking. *Thisbe* has the "V" aspect to a marked degree when viewed, bow on, through squinted eyes. *Quest* is a wine glass. Hard bilges and a swift curve in to her rather small keel.

The first day *Thisbe* went out in front and was never headed. Both were reefed, for it blew at times up to 25 miles an hour, and the Yankee boat was far the tenderer. The farther over she lay, the closer to weather she seemed to sail, and Barrows flogged her up the two 4½-mile windward legs of the 9-mile windward and leeward course without mercy. The Canadian did not take kindly to the bumpy going. Her modified spoon bow gave her a heave and she occasionally spanked a big one with a crash like a sperm whale slapping flukes. The knockdowns bothered her. Off the wind she set a great, pot-bellied, loose-footed spinnaker with three ventilation holes. It looked as big as the British Navy Dirigible R-100 that flew over the course on the first day. There is little doubt that it was of great value with the wind dead aft and she gained on both runs in the hard chance of that first day. *Thisbe* won by 54 seconds.

Thisbe carried away her lower starboard spreader three minutes after the start of the second race. It was the same nor'wester with a little more meat on its bones, and her spar took a whip that developed a pressure crack when the rigging let go. The Canadian sailed over the course, as he was obliged to do, and the Rochester skipper towed home and started to rig a new stick. Score, even up at one all.

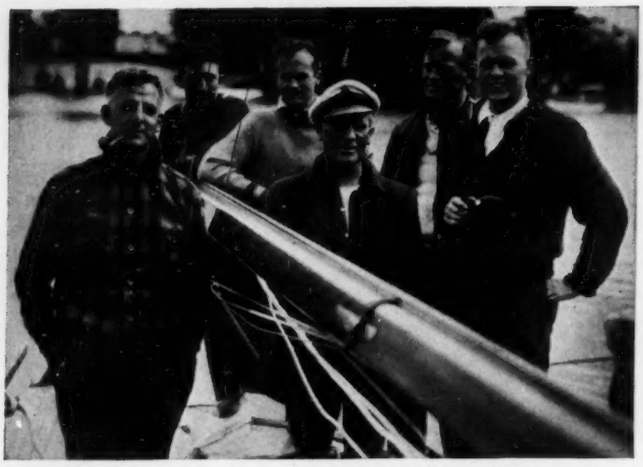


The Canadian challenger "Quest" turning to windward in the hard breeze of the second race

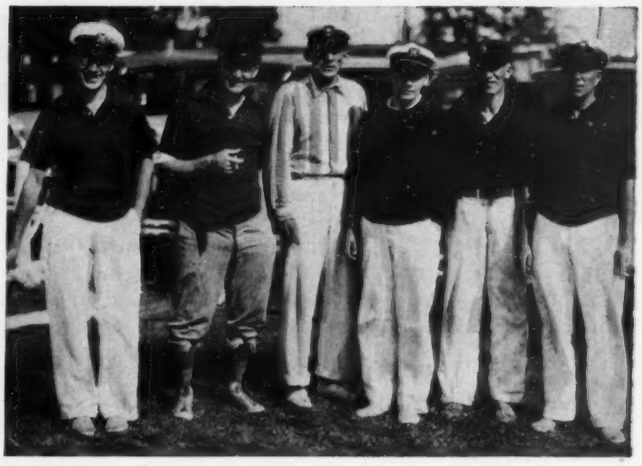
Ready to Sail

Thisbe did not have a spare spar of her own, but the locker yielded an extra stick belonging to *Conewago*, the Stephens-designed trial boat. After ten hours of Herculean labor, it was made to fit. Flood lights were rigged and the work went on until midnight. Commodore Gooderham of the Canadian Club tendered a day of grace but the Yankee skipper said that he would rather sail.

Barrows gave *Thisbe* a tuning-up spin in light airs before race time, and then won the third race in conditions that the *Quest* was supposed to thrive on. There was a very light breeze off the shore, with no sea at the start. It freshened a bit before the finish. The situation was a dramatic one and it caught the fancy of the public. Barrows was well on the way to becoming a hero to the fans, most of whom did not know a clamshell dredge from an Egyptian felucca, but who knew their dramatics when they saw them. *Thisbe* led *Quest* across the finish line by 1 minute



The crew of the challenger. Left to right: Douglas Addison, the professional, Walter Windeyer, Norman Gooderham, skipper, Jack Bartlett and Robert Jarvis



"Thisbe's" crew consisted of W. P. Barrows, skipper (center), Theodore Pickering, James Snell, Taylor Howard, T. Moline and John Taylor

53 seconds after sailing a 21-mile triangular course.

But in exactly the same sort of going *Quest* evened the series on the fourth day. Norman Gooderham, Canada's best helmsman, and his boat, seemed to find themselves in this race. Gooderham's weather sailing was beautiful to watch and *Thisbe*, suffering from Genoese jib trouble, sagged under him and lagged astern.

The Canadian stuck his stem into a dead spot on the last leg of the leeward and windward course and a lead he had fought for three hours to win vanished like smoke in three minutes. The Yankee held a breeze and sailed a wide semicircle around him. But Gooderham again caught the defender on the run home, the wind having shifted to nor'west, and passed her to leeward to win by just 28 seconds.

It was now even up at two races for each boat, and the city was all but forced to declare a municipal holiday for the last and deciding race.

The *Quest*, up the first leg, a thrash to windward, repeated her performance of the previous day. She lugged a big Genoa jib and outfooted and outpointed the defender, dressed in a working jib. Unfortunately, in the murk she overstood the mark by three-quarters of a mile. But she caught the defender again on the next leg and led for a round.

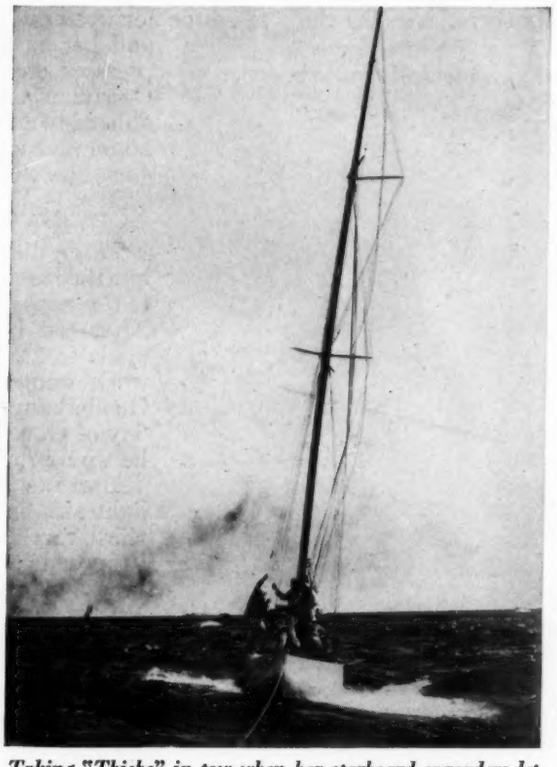
And then the *pièce de résistance* of the whole show, the thrill that the public had hoped to experience occurred. *Thisbe*, apparently hopelessly outclassed, was a hundred yards astern, with two legs left, a run with the wind over the quarter and a close reach. She was carrying a double spinnaker. *Quest* could not lug her big loose-footed spinnaker and flew its supplement, a regulation sized sail.

The Rochester boat closed, slowly and relentlessly. A mile from the turn, and it was evident that she was within striking distance and at just the right moment she went through. She turned into the close reach for the finish line and the Cup, 14 seconds, or four lengths ahead of *Quest*. Ten minutes before the odds were 100 to 1 against her at Lloyd's. Now it looked as if she would win. The gallery went mad.

Swinging her big Genoa jib that lifted her along in grand style, she won by a scant twenty seconds. The tables below give the summary of each race.

The sailing was a blending of brilliance and error. There were times when it was full of flaws. There were other moments when it sparkled. Barrows took four of the five starts. Two of them were very important. The performance of the boats appeared very erratic. First one and then the other would win in every type of sailing. *Thisbe* excelled on the wind during the first days and was inferior in the later races. She was, at times, outrun, and, in turn, she outran.

After the finish of the last race Commodore Gooderham intimated that there will be another challenge in 1932 in the Eight-Metre Class.



Taking "Thisbe" in tow when her starboard spreaders let go soon after the start of the second race

SUMMARIES

FIRST RACE

First Round	1st Mark	1st Round
Thisbe	1.02.02	1.34.48
Quest	1.02.53	1.35.10
Second Round	**1st Mark**	**Finish**
Thisbe	2.33.08	3.03.56
Quest	2.34.38	3.04.50

SECOND RACE

First Round	1st Mark	2nd Mark	1st Round
Quest	12.48.18	1.18.07	1.42.15
Second Round	**1st Mark**	**2nd Mark**	**Finish**
Quest	2.29.08	3.00.38	3.24.35

THIRD RACE

First Round	1st Mark	2nd Mark	1st Round
Thisbe	12.46.25	1.33.43	2.06.23
Quest	12.47.11	1.37.03	2.08.22
Second Round	**1st Mark**	**2nd Mark**	**Finish**
Thisbe	2.40.25	3.10.02	3.42.40
Quest	2.42.58	3.11.57	3.44.33

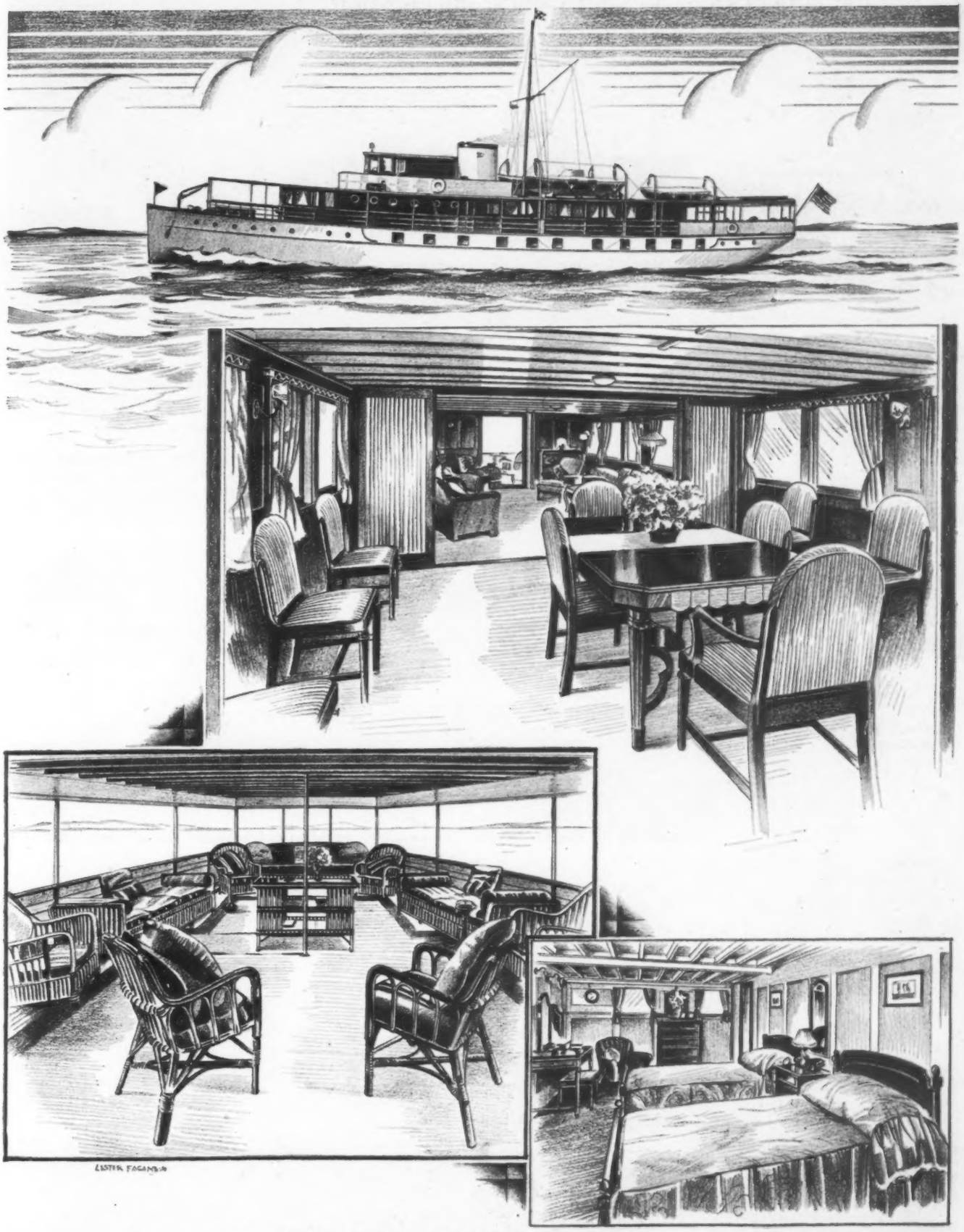
FOURTH RACE

First Round	1st Mark	1st Round
Thisbe	12.42.48	1.50.28
Quest	12.42.58	1.48.18
Second Round	**1st Mark**	**Finish**
Quest	2.53.06	4.12.10
Thisbe	2.57.05	4.12.38

FIFTH RACE

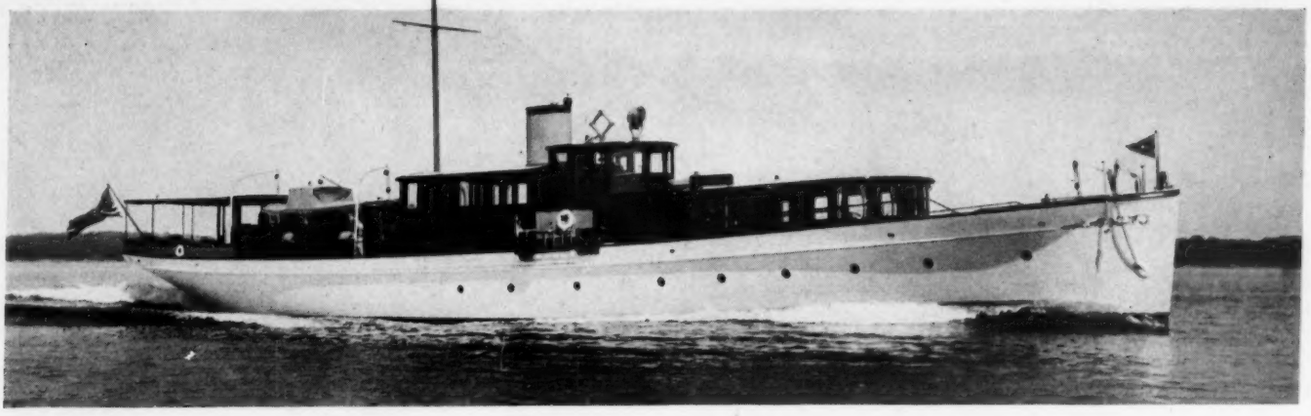
First Round	1st Mark	2nd Mark	1st Round
Thisbe	1.28.40	2.01.24	2.24.51
Quest	1.28.52	2.01.28	2.24.29
Second Round	**1st Mark**	**2nd Mark**	**Finish**
Thisbe	3.06.42	3.35.18	4.15.57
Quest	3.05.18	3.35.32	4.16.17

"Truant," A Modern Houseboat Type Diesel Cruiser



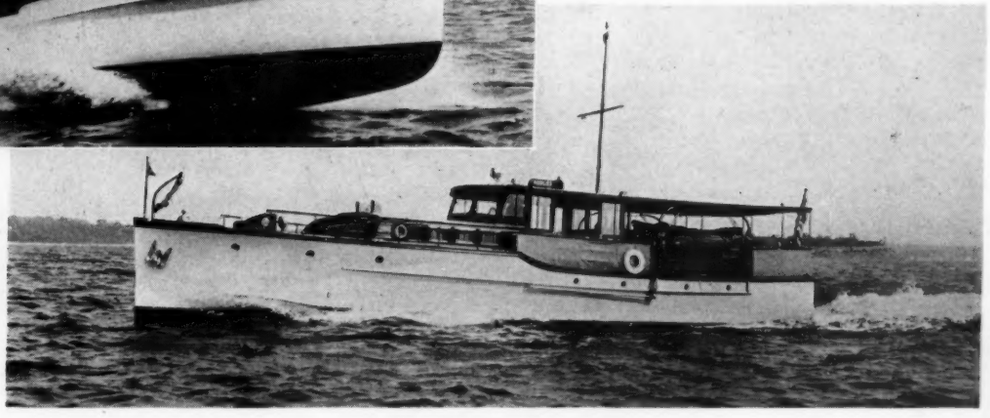
In Truman H. Newberry's new 121-foot Diesel cruiser "Truant," the Mathis Yacht Building Company have turned out a remarkably able and handsome yacht. The accommodations are spacious, even for a boat of this type, the deck living quarters opening into each other, as the reproductions show. Power is supplied by two 8-cylinder Winton Diesels

Many New Yachts Will be Seen in the Large Fleet Gathered Near the America's Cup Course off Newport



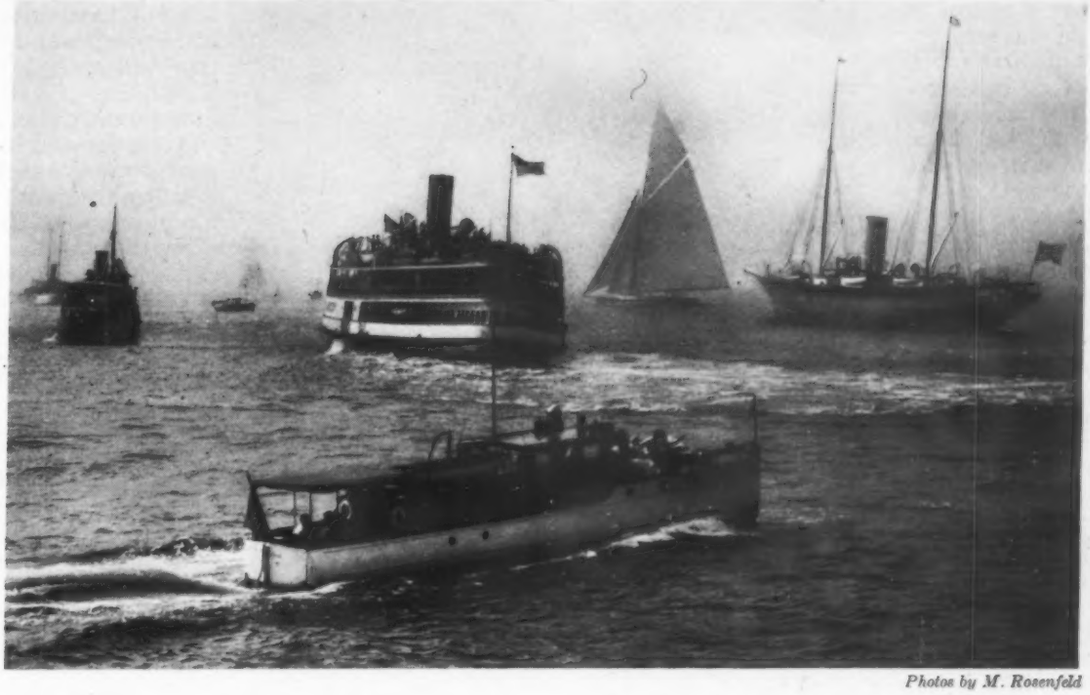
"Analgra" is a new 120-foot fast Diesel cruiser owned by Lewis E. Pierson, of New York. Designed by C. D. Mower, and built by H. B. Nevins, "Analgra" is a very handsome craft. Two 8-cylinder Winton Diesels furnish the power

Plenty of small craft will be on hand to see the races, including Philip M. Plant's 38-foot a.c.f. sport cruiser "Lolita" (at left) which hits the high spots at 33 m.p.h. with a pair of Scripps 175 h.p. motors

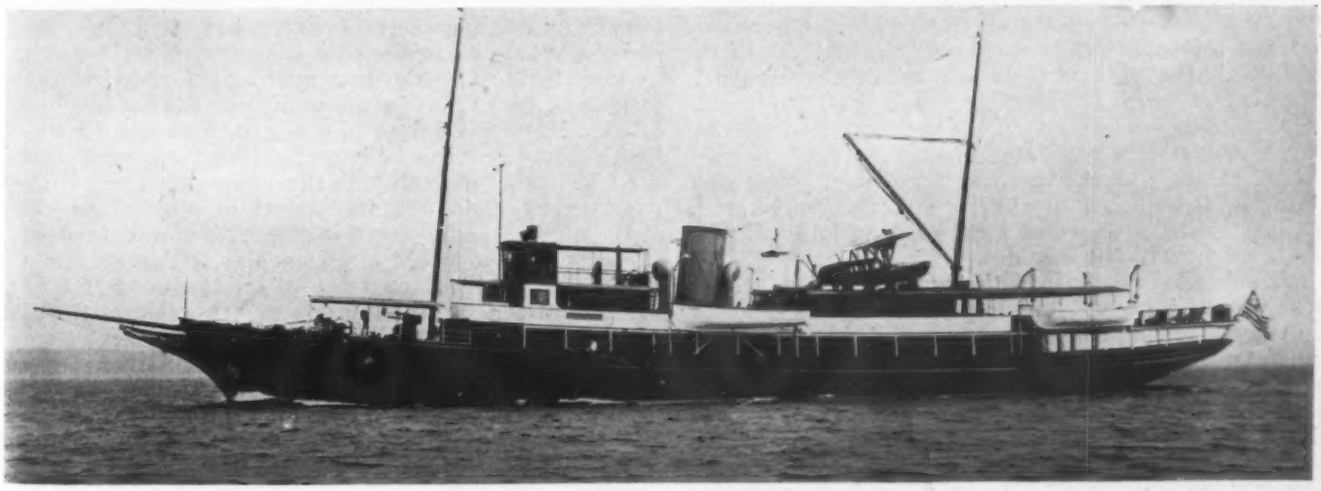


"Audlee," a 62-footer owned by William H. Weekes, of Brooklyn, and designed by Louis L. Kromholz

"Jem," another new one, owned by Jeremiah Milbank, of the New York Yacht Club. She is a 75-footer from designs by J. H. Wells, and was built by the Consolidated Shipbuilding Corporation



Photos by M. Rosenfeld



"Damargeo" (at top), owned by George F. Breen, is one of the latest Consolidated commuters to appear on the Sound. She steps along at 20 m.p.h. with two Winton gasoline motors. (Center) Part of the sightseeing fleet at the last Cup race in 1920. (Bottom) "Lotosland," a new 205-foot Diesel cruiser designed by Cox & Stevens for Col. E. A. Deeds, of New York. She is equipped with a Sikorsky flying boat for commuting use. Pusey & Jones are the builders.

Twenty-Three Yachts Sail Annual Race to Mackinac

"Siren" Wins 331-Mile Race for Third Time. "Cynthia" Places First in Cruising Division

By STEVE HEALEY

THE Class Q sloop *Siren*, owned by the Karas Brothers and flying the burgee of the Chicago Yacht Club, sailed to victory in the racing division of the Chicago Yacht Club's twenty-third annual race from Chicago to Mackinac Island. J. L. Williamson's yawl *Cynthia*, carrying the same colors at her masthead, accounted for honors in the cruising class. *Siren* had won this yachting classic twice before and her third win sets a record in the history of the race.

The story of *Siren's* well deserved victory is a treatise on the resourcefulness and loyalty of a crew of Corinthian sailors who threw every ounce of energy into the winning of the race. Just a week before the race the schooner *Volante* collided with *Siren* while the latter was riding at anchor in Belmont Harbor. The smash tore out *Siren's* spar. To her heartsick crew, helplessly watching from the clubhouse, it looked as if her chances for the race were over. But the skipper, Olie Karas, rallied the crew and fifteen minutes later a long distance call to the East brought the assurance that a new mast would be shipped in time to arrive two days before the race. Working feverishly night and day, *Siren's* crew stepped the big stick and rerigged her. An hour before the start all hands were still rigging. As *Siren* scudded across the line each member of the harassed crew tinkered with this and tightened that. No doubt all sent silent supplications heavenward that things would "stay put."

"Siren," three times a winner in the Mackinac Race. This photograph shows her double spreaders and high rig

And things did remain firm throughout the long grind, but it was no fault of the weather man who gave the fleet every conceivable twist of wind and weather all the way up to the Island.

Siren headed north with the crack of the gun in a fresh westerly breeze. The race was hardly ten minutes old when the wind shifted to north. This headed *Siren*, and she made frequent tacks until late Saturday evening when a more favorable breeze allowed her to hold up within three points of her true course. *Intrepid*, the giant Class P sloop skippered by Don Prather and Mal Vail, was slightly in the lead. A northwest slant of breeze now enabled *Siren* to hold her course and she gradually picked up on *Intrepid* to pass her at midnight. At 2 A.M. Sunday morning *Intrepid's* riding lights were discernible far to windward, but finally they were lost in the darkness and *Siren* sailed on alone through the night.

Sun up and the crew once more sighted *Intrepid* five miles astern and *Vagabond*, the Milwaukee "P" boat, off the port quarter but holding far out in the lake. The wind was now almost due south and dead aft, making it a run. *Siren's* "ace in the hole" was now fished out of the fo'c's'le. A spinnaker with a 44-foot hoist was set. *Siren's* hoist being only forty feet, the crew tied the overhang into a cute little posy and all day long this sail pulled steadily. This piece of canvas was dubbed the circus tent and the skipper and crew were unanimous in saying that it helped more in the ultimate victory than any other that was used.

At 11:15 Sunday morning *Siren* passed the tanker *W. P. Cowan* on the steamer course to Betsy, and received the information that they were ninety miles off Chicago. At 3:45 P.M. *Siren* made a landfall off Little Sable Light and was abeam of it at 4:30. Toward evening the breeze shifted, going east of south, and the big spinnaker was doused. *Intrepid* immediately started to pick up and forged ahead steadily.

From the northwest came huge black and forbidding clouds. Lightning streaked the sky and an impenetrable darkness settled, bringing one of the nastiest rain squalls encountered on the trip. Fearing to trust to the new spar and rigging, *Siren's* crew took two tucks in the main and headed far out into the lake off Frankfort. During the night the barometer, which had been falling all evening, hit a new low level and the wind boxed the compass. The squall finally blew itself out and morning found *Siren* off Point Betsy. A lumpy sea was still running and a northwester forced her to tack back and forth five times before she was able to round the point at about 5.00 A.M.

At 9:15 A.M., Monday, *Siren*, close-hauled, was making for South Manitou Islands when a heavy fog was seen rolling in toward her. No log having been streamed, several cross bearings were taken and an absolute fix determined just as the fog closed. A dead beat from this position brought *Siren* to the North Manitou Lightship. The dense fog was finally pierced by the voice of the lightship tender who told them that some boat which they could not identify had passed at six that morning. Much confusion and cogitating, and the crew finally decided that Eddie Purtell's

Vagabond was in the lead. Since *Vagabond* had to give *Siren* considerable time, new hope arose and with it, like a dash of cold water in the face, a dead calm. For two hours *Siren* lay wallowing in the calm until a light north by west wind blew up that enabled her, close-hauled, to come abeam of the northerly end of the North Manitou Islands. Here the fog lifted, disclosing four sails astern. Glasses identified them as *Princess, Intrepid, Volante* and *Quicksilver II*. *Intrepid* was beginning to creep up fast when the wind shifted — this time from the northwest — enabling *Siren* to work out a commanding lead on *Intrepid*.

"Quicksilver II," a contestant in the Bermuda Race this year, placed second in the cruising division

Between this point and Beaver Island *Siren* ran into another nasty northwest squall Monday evening. It gradually diminished, leaving a fair sailing breeze that lasted during the night and until 5.00 A.M. Tuesday morning, when Grays Reef Lightship was sighted.

Variable winds necessitated frequent tacking from this point all the way to the Island. *Siren* crossed the finish line at 8:11 A.M. Tuesday morning, second boat in, to win on corrected time by one hour and five minutes from the Milwaukee owned sloop *Vagabond*.

Vagabond led all the way to the Island and was unfortunate in losing, by this slight margin, in the long distance of 331 miles. The only comment made by her game crew was "Well, we'll just have to be in an hour and a half earlier next year."

Dorello, O. Lyman Dwight's entry from Milwaukee, was far down the list this year. Sailing a different race than heretofore, Dwight ran into more trouble, and a story akin to his can be found in any two exciting chapters of the numerous works of Conrad. Briefly, he arrived at the Island with one lone spinnaker that had not been torn. All other sails had blown out and his crew were sewing canvas from dusk till dawn. *Princess*, owned by Edmond Jedrykowski, was third in the racing division, his crew having sailed a heady race all the way.

The cruising division race was largely a test of patience. Col. A. E. Peirce, of New York, brought his *Quicksilver II*, fresh from the Bermuda Race, over the line first and waited hours for the others of his division. During the long afternoon, with no boats in sight and a dead calm outside, it was generally supposed that no boat could finish in time to save her allowance on *Quicksilver*. Just as Col. Peirce and his crew were about to celebrate a dull boom from Round Island Light announced another boat across the line. This was *Cynthia*, and when times were figured, it was found that she had taken the cruising division prize away from *Quicksilver* by a margin of 1 hour 9 minutes 40 seconds.

Elizabeth, owned by Lynn Williams of the Chicago Yacht Club, was third in this class, nosing out *Bagheera*, Bob Benedict's schooner which last year won the race, by five minutes. Alex Heglund, who skippered *Elizabeth*, was making his last voyage on fresh water. After 21 continuous seasons on the lakes he is returning to Norway. Heglund has been one of the best liked skippers on the lakes and has sailed in every Mackinac Race for years, deserting only once, two years ago, when he sailed on *Elizabeth* in the Bermuda Race. In that event *Elizabeth* placed second in her division.

An unfortunate occurrence in connection with this year's race was the accident which resulted in the sinking of the yawl *Scarab*. Her owner, George Pulver, of Washington, D. C., had sailed the *Scarab* all the way from Chesapeake Bay to enter the race. She was sunk off Belmont Harbor in a collision with a speed boat.

The corrected times of all competing yachts follow:

J. L. Williamson sailed his yawl "Cynthia" to victory in the cruising division

Yacht	*Owner*	*Corrected Time*
CRUISING DIVISION		
Cynthia	J. L. Williamson	63–09–08
Quicksilver II	A. E. Peirce	64–18–48
Elizabeth	Lynn Williams	64–40–57
Bagheera	Bob Benedict	64–50–43
Hilaria	H. R. Schadlee	65–19–32
Volante	Sterling Morton	66–04–09
Bangalor	D. H. Ross	67–29–21
Malabar VI	J. S. Davis	68–56–02
Clio	B. Nordberg	69–24–10
Truant	H. J. Morton	70–43–44
Bimesa	W. W. Knight	74–48–56
Sea Girl	H. M. Driscoll	D.N.F.
RACING DIVISION		
Siren	Karas Brothers	58–10–25
Vagabond	Purtell-Adler-Stone	59–15–29
Princess	Ed Jedrykowski	60–54–12
Patsy	Hewitt-Ortmayer	63–54–09
Intrepid	Hough-Prather-Eckstein	65–06–00
Seboomock	E. H. Carlson	65–07–17
Freya	J. McMonies	66–04–57
Dorello	O. L. Dwight	66–18–32
Illinois	Newman Brothers	68–51–13
Joyant	De Lisle Syndicate	71–22–44
Tecumseh	Julian Armstrong	73–16–35

The start of the Bayside-Mackinac Race, July 19th, found 13 yachts at the line. (Left to right) "Grace," "Suez II," "Trident," "Margie V," "Barbette"

Bayview-Mackinac Race Won by "Trident"

Light Winds, Calms and Squalls are Features of the Sixth Annual Cruising Race

By P. M. SCOTT

AFTER battling with light winds, calms and squalls, the thirteen starters in the sixth annual race from Port Huron to Mackinac finally reached the finish on July 23rd, having started July 19th. This annual 240-mile event, which is open only to genuine cruising boats, in cruising trim, was won by the new yawl *Trident*, which defeated quite handily a good field of fine craft.

This year much interest was aroused by *Trident*, a new Alden-designed yawl, owned by Alger Shelden, Warren Booth, and Cleveland Thurber. Her crew had sailed the little sloop *Urchin* each year since the inauguration of the race. *Trident*, a smart jib-headed yawl, started without even a shake-down cruise, her new staysail being put aboard but a few hours before the race. But at the gun she stepped out like a lady and was never headed, reaching the finish hours ahead of her two closest rivals, *Suez II* (ex-*Sachem*) and *Barbette*, winner of two previous Mackinac races.

There are, however, twelve skippers who can advance logical reasons to show that "if" or "only" certain events had or had not transpired another boat would have been the custodian of the DeRoy Trophy for 1930.

The weather was not to the liking of the hard-boiled skippers of the fleet, and gave but little opportunity for the lucky breaks that so often radically alter the situation in a long distance race. And those who needed a beat to windward in half a gale of wind had little opportunity to show their form.

A light N.W. breeze put the yachts across the line with well started sheets and ballooners when the gun boomed at 4:00 P.M. *Charlyn* was first across, but the leaders were well bunched, and *Trident* and *Melodie* soon were out ahead. A few hours later, with a breeze that gave not much more than steerageway, the fleet scattered somewhat.

Sunday came in with a very light breeze from the eastward, and this continued until 10:30 P.M., when a couple of hard squalls from the N.N.W. made things quite interesting for a few hours. But with the squalls over, the wind again hauled to the East and came in light. Monday morning brought light N.E. breezes which shifted in the afternoon to N.W., but remained light.

The sailor's curse, "light head winds," continued to hold. *Nawanna* dropped anchor for six hours, and *Charlyn*, outside and to the northward, flopped about becalmed. *Trident*, *Suez II*, and *Barbette*, then leading, had carried a little wind with them; *Melodie* had drifted up into Thunder Bay and lost hours getting out into the lake again. *Kittiwake* and *Red Arrow*, which had held to the eastward in hope of more wind in mid-lake, rolled about and missed even the excitement of Sunday night's squall.

Tuesday morning ushered in a fresh nor'wester, which took the leaders to the finish in fine style, the stragglers making slower speed as the wind gradually subsided until it was quite light when the last boats crossed the line on Wednesday. It was a great race, with a fine fleet and keen competition, and, it is hoped, paves the way for an even more successful event next year.

The summary:

Yacht	*Owner*	*Elapsed Time*	*Corrected Time*
Trident	Alger Shelden Warren Booth Cleveland Thurber	54:09:40	54:09:40
Suez II	H. M. Grant	62:22:15	62:22:15
Barbette	T. P. Archer	66:35:32	66:00:37
Charlyn	P. C. Williamson	73:58:19	69:58:35
Melodie	R. A. Bell	72:58:20	70:16:30
Grace	A. E. Denio	75:28:35	71:14:01
Nawanna	T. B. Farnsworth	75:10:05	71:42:15
Margie V	Ernest M. Kraetke	75:08:58	71:58:01
Josephine	Wm. A. Petzola	80:24:15	78:06:58
Kittiwake	Trent McMath Robert G. Kales	90:58:10	86:24:32
Diana	P. R. Tappan	93:11:26	89:13:29
Red Arrow	J. W. Vaughan	103:18:00	101:57:18
Silhouette	Fred S. Ford John Owen, III		D. N. F.

On the New York Yacht Club Cruise

The annual cruise of the New York Yacht Club to the eastward this year was heightened by the presence of the four America's Cup aspirants racing as a special class. While light to moderate winds prevailed, the run from Newport to Mattapoisett was enlivened by a heavy sou'wester in which several spars were lost, and two men washed overboard. The pictures below show some of the smaller boats on that run

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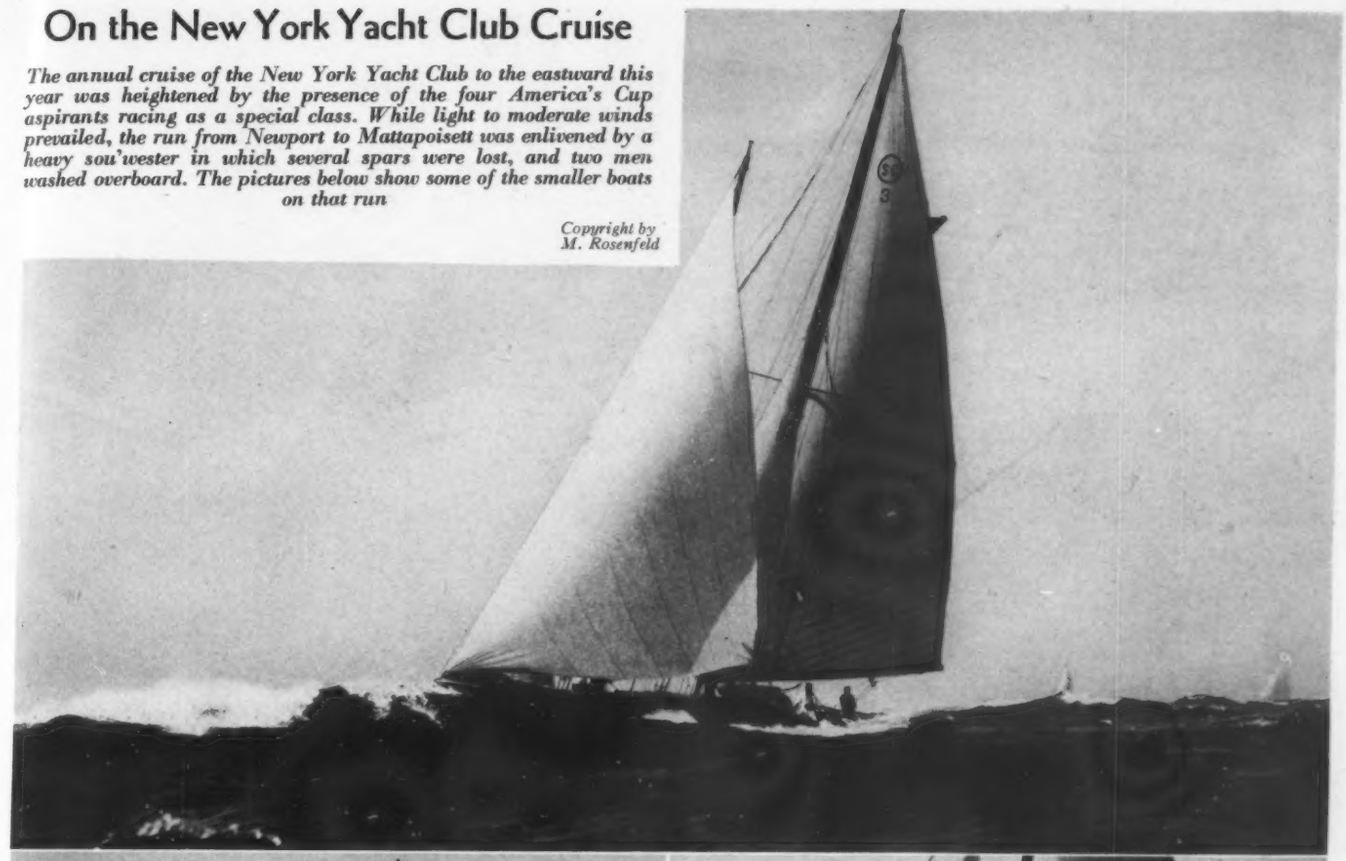
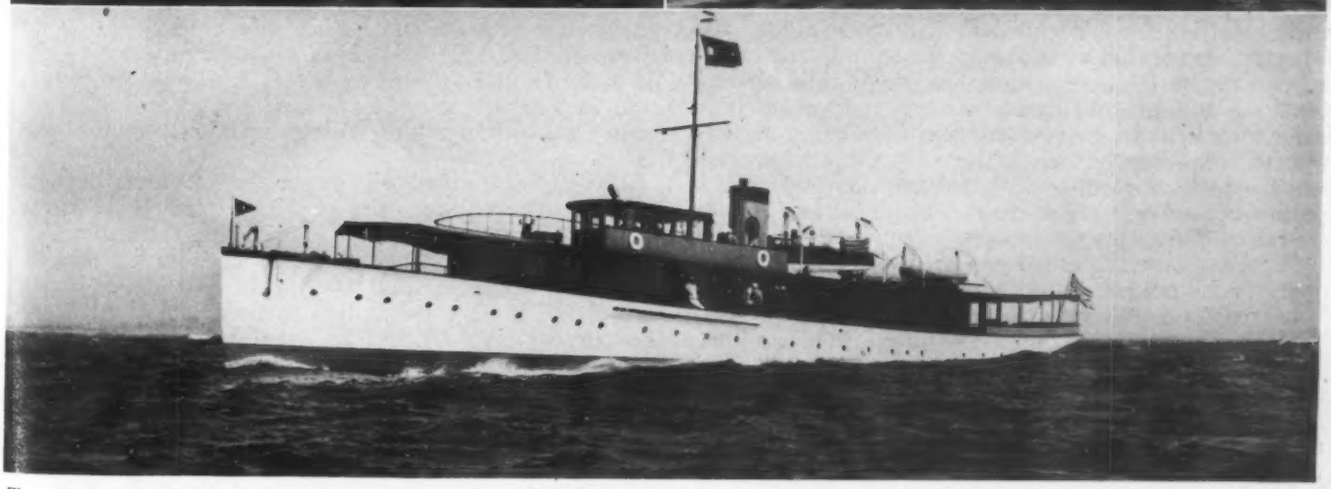
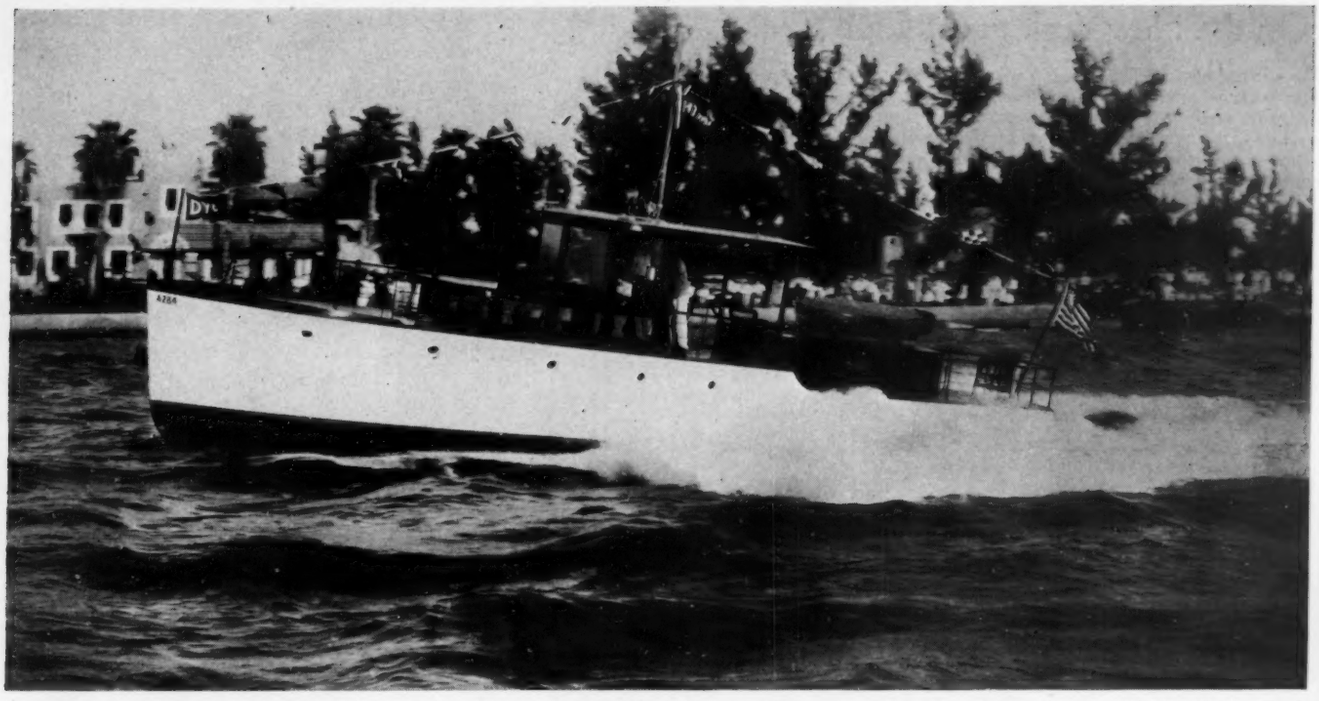




Top. R. P. Noble's "Flying Fish" approaching Hen and Chickens Lightvessel. Center, left. J. C. West's "Phantom." "Branta," George G. Milne's Ten-Metre. Bottom. S. A. Savage's "Colleen" served the race committee on the cruise



A 40-mile-an-hour commuter. "Gar Senior II," a 50-foot high speed cruiser recently purchased by Mr. George Armsby, of New York. She is used for commuting between her owner's summer home on Oyster Bay and the New York Yacht Club station, making the run in about 55 minutes

The Federal Motor Boat Laws

Part II—Equipment

By CHARLES F. McKIVERGAN

IF ANY one portion of the federal motor boat laws were to be singled out as of greater importance than the others, that distinction should descend upon the equipment laws. All of the other requirements are designed to control the conduct of the motor boat operator and to influence it to the end that the dangers of navigation may be successfully avoided. Experience has demonstrated that conscientious compliance with those regulations serves to keep the motor boat operator from endangering the property and lives in his care.

Emergencies, with all their possibilities, however, remain. It may be a case of burning gasoline, a leaky craft resulting from a collision with some hidden obstruction or another vessel or, perhaps, only one of the lesser dangers that occur now and then. It is obvious that the majority of boat owners, year after year, incur no mishaps which endanger either their vessels or themselves. Yet the possibility of such emergencies, which can be met only with proper physical means, should be sufficient incentive to make all motor boat operators anxious to meet the safeguards prescribed. Even the chance that such preparedness may enable an operator to render aid to another craft should make him anxious to abide by the equipment regulations.

It cannot be emphasized too often that complete observance of the regulations as to equipment eliminates practically every chance of fatal disaster. This measure of assurance, alone, is, surely, sufficient to make clear the foolhardiness of failure to abide by them. Should any boat owner, however, require further incentive to imbue him with a proper respect for these regulations, it is certain that the enforcement authorities will provide the necessary impetus when occasion demands.

An Act of Congress, approved June 9, 1910, prescribes the equipment of motor boats operated on navigable waters of the United States. In so far as these requirements are concerned, the term "motor boat" includes "every vessel propelled by machinery and not over sixty-five (65) feet in length, except tug boats and tow boats propelled by steam." Thus, the equipment law assembles the documented, numbered and outboard motor boats into one group that includes all craft not exceeding sixty-five (65) feet in length. All outboard-propelled craft are, then, treated as motor boats within the meaning of the law and are subject to its requirements. This point is of great importance to the owners of outboard-driven boats. It should be noted, too, that auxiliary craft are regarded as motor boats, even when they are being operated under sail alone.

Having assembled all motor boats, regardless of type, into one group, the equipment law proceeds to divide the group into three classes, the class to which any vessel belongs being determined by its length. All motor boats less than twenty-six (26) feet in length are placed in class one. Class two consists of all which are twenty-six (26) feet or over and less than forty (40) feet in longitudinal measurement. Those which are forty (40) feet or over and not more than sixty-five (65) feet in length are grouped in class three. The law then proceeds to prescribe the minimum equipment that must be carried on motor boats in each of the three classes. To determine just what equipment his vessel must carry, therefore, the owner simply measures

his craft from end to end over the deck, excluding sheer.

The prescribed equipment in all cases consists of running lights, sound-producing devices, life-saving devices, and means for extinguishing burning gasoline. Under each of these four headings the requirements placed upon each of the three classes of motor boats are explained in full. Some will be found to be identical for all three classes, while some are prescribed only for vessels in one or, perhaps, two classes. The measurements of many items, moreover, differ for the three classes.

Lights

The law does not specify that the lights be on board a motor boat during the daytime. But it does require that they be on board, lighted and in their proper places in all weathers whenever the vessel is in actual operation on navigable waters between the hours of sunset and sunrise. At such times, of course, no other lights may be exhibited which are likely to be mistaken for those prescribed. The specific requirements are as follows:

Class One

Motor boats in class one are required to carry

1. A white light aft to show all around the horizon.
2. A combined lantern in the fore part of the vessel and lower than the white light aft, showing green to starboard and red to port, so fixed as to throw the light from right ahead to two points abaft the beam on their respective sides.

It should be noted that the aft light must be higher, and so placed as to form a range with the forward light and that it must be clear of house awnings and other obstructions.

Many owners of motor boats in class one, however, find it inconvenient to carry the two-color combination lantern forward. For the accommodation of such owners, the law does allow motor boats in class one to carry separate red and green side lights. But operators who take advantage of this privilege must remember that, in this case, the craft must carry a white bow light in addition to the white aft light required on all classes of motor boats. Though motor boats in class one are thus permitted to carry four separate running lights, it is desirable that, wherever possible, they be provided with the two-color lantern forward and the white light aft.

The lights selected for use in class one are not required to be fresnel or fluted, nor are screens required for them. Neither does the law specify the sizes of the lights to be carried. Nevertheless, the lights should be large enough to accomplish the purpose intended and, to that end, it is recommended that the illuminated portion of such lights or lenses be not less than three (3) inches in diameter.

Class Two

Motor boats in class two are required to carry

1. A bright white light in the fore part of the vessel as near the stem as practical, so constructed as to show an unbroken light over an arc of the horizon of twenty (20) points of the compass, so fixed as to throw the light ten (10) points on each side of the vessel, namely, from right ahead to two points abaft the beam on either side. The glass or lens must be of not less than nineteen (19) square inches.
2. A white light aft to show all around the horizon, higher than, and so placed as to form a range with, the forward light. It must be clear of house awnings and any other obstructions.
3. On the starboard side, a green light so constructed as to show an unbroken light over an arc of the horizon of ten (10) points of the compass, so fixed as to throw the light from right ahead to two (2) points abaft the beam on the starboard side.
4. On the port side, a red light so constructed as to show an unbroken light over an arc of the horizon of ten (10) points of the compass, so fixed as to throw the light from right ahead to two (2) points abaft the beam on the port side.

It is required that the glasses or lenses in the side lights be of not less than sixteen (16) square inches; that all glasses or lenses in lights prescribed for this class be fresnel or fluted; and that the lights be fitted with inboard screens of sufficient height, so set as to prevent the lights from being seen across the bows. To meet this requirement, the screens chosen for use on boats in class two must be not less than eighteen (18) inches in length.

Class Three

Motor boats in class three are required to carry

1. A bright light in the fore part of the vessel. The light must be placed, constructed and fixed exactly as is required of the corresponding light for class two. On class three vessels, however, the glass or lens in this light must be not less than thirty-one (31) square inches.
2. A white light aft, similar in range and in placement to the white aft light required on class two motor boats.
3. On the starboard side, a green light constructed and fixed in the manner prescribed for craft in class two.
4. On the port side, a red light, likewise constructed and fixed in the manner prescribed for the corresponding light on vessels in class two.

On motor boats in class three, however, it is required that the glasses or lenses in the side lights be of not less than twenty-five (25) square inches. As in the case of class two vessels, all glasses or lenses must be fresnel or fluted, and must be fitted with inboard screens of sufficient height and so placed as to prevent the lights from being seen across the bows. This means that, on class three motor boats, the screens must be of no less than twenty-four (24) inches in length.

Owners of auxiliary motor boats should keep in mind that, while such craft are being propelled by sail and machinery, or by sail alone, between the hours of sunset and sunrise they must carry the colored lights, suitably screened, but that the white lights must be extinguished. So, too, is it required that, on any motor boat which is forced to proceed under sail in whole, or in part, because of some temporary disablement of the machinery, or lack of gasoline, or for any other reason, the white lights be extinguished and that the craft be provided with colored lights only. But, in neither case is the vessel thus converted into a sail boat in the eyes of the law. Hence, all of the other motor boat equipment must be on board and readily available.

Sound-Producing Devices

Class One

Motor boats in class one are required to carry only one sound-producing device. This must be a whistle or other mechanical appliance capable of producing a blast lasting two seconds or more in duration and heard for a distance of at least one-half of one mile. This may be of any style or size, provided that it produces the required type of sound and is available for instant use.

Even a foghorn of the type prescribed for use on motor boats in classes two and three is acceptable, therefore, on class one motor boats.

Class Two

Motor boats in class two are required to carry

1. A whistle or other sound-producing mechanical appliance capable of producing a blast lasting two seconds or more and heard for a distance of at least one-half of one mile.

2. An efficient foghorn. Under the law, the word "efficient" is to be taken in its ordinary sense. The foghorn, of course, cannot take the place of the whistle. It may be of any style or size, provided it is sufficient for the use intended.

3. An efficient bell. As in the case of the foghorn, this may be of any style or size whatever.

Class Three

Motor boats in class three are required to carry

1. A whistle or other sound-producing device of the sort described above.

2. An efficient foghorn which, of course, cannot take the place of the whistle. Likewise, it may be of any style or size.

3. An efficient bell. As on vessels in class two, this bell may be of any style. But, to be acceptable for use on class three motor boats, the bell must measure not less than eight (8) inches across the mouth.

Life-saving Devices

Class One; Class Two; and Class Three

Requirements in respect to the life-saving equipment are the same for all motor boats, regardless of their length or the class to which they belong. The number of life-saving devices which must be carried at any one time is always in direct proportion to the number of passengers who are on board. It thus becomes necessary to see that the number of persons carried is never in excess of the number that can be accommodated by the life-saving equipment. Every motor boat which is not carrying passengers for hire must carry either life preservers, or life belts, or buoyant cushions, or ring buoys, or other devices of types approved by the Secretary of Commerce, sufficient to sustain afloat every person on board the vessel. By "every person" the law means all members of the crew, every adult passenger, all children and all babies, regardless of age. If it is at all practicable, furthermore, the owner of a motor boat should consult local inspectors or other qualified persons before purchasing life-saving devices for his craft. By doing so, he can be sure that the devices are composed of material known to be suitable for the purpose.

In addition to the above mentioned devices, the enforcement authorities permit the use of life preservers and buoyant cushions on motor boats which are not carrying passengers for hire under the following conditions:

Each life preserver or buoyant cushion must be capable of sustaining afloat for a continuous period of twenty-four hours (24) an attached weight, so arranged that, whether the said weight be submerged or not, there shall be a direct downward gravitational pull upon such life preserver or cushion of at least twenty (20) pounds. If a buoyant cushion is furnished for more than one person, however, its capacity must be proportionately greater. It is important to note that no such preservers or buoyant cushions, stuffed or filled with granulated cork or other loose granulated material, and no pneumatic life preservers or cushions will be approved. Nor are planks, oars, floorings, gratings, corks on ropes or fish nets, empty casks or kegs, wooden boxes or skiffs in tow approved as substitutes.

On the other hand, wooden life floats, made of light buoyant wood, may be used. But the dimensions of such a float must be not less than four (4) feet in length, twelve (12) inches in width and one and three quarters (1¾) inches in thickness. The weight of the float, to be approved, must not be in excess of twenty-five (25) pounds, and may be made in one or two pieces. If made in two pieces, however, they must be securely attached with wooden dowels. No metal is to be used in the construction of the float. Each float must be provided with two handholes, one at each side, midway in length, which must be cut through the float and be not less than six (6) inches in length and two (2) inches in width, with a margin of at least one (1) inch at the edge of the float. Wooden life floats made of balsa wood, properly encysted and treated, may be used, but such floats must be not less than three (3) feet in length, eleven and one half (11½) inches in width and two (2) inches in thickness. Obviously, floats of the above types are suitable for use on only the larger motor boats. The majority of motor boat owners, therefore, will not find them convenient substitutes for the more commonly used life-saving devices. Samples of other substitutes for the articles described must always be first submitted to the Supervising Inspector General, Steamboat Inspection Service, Washington, D. C., for examination and approval.

It is well to reiterate that all of the above described life-saving equipment is approved only for use on motor-driven craft not engaged in carrying passengers for hire. Special requirements apply to boats which, at any time, carry passengers for hire. These will be discussed later.

Means for Extinguishing Burning Gasoline

Class One; Class Two; and Class Three

As in the case of the life-saving equipment, the federal requirements as to the means for extinguishing burning gasoline are the same for all motor boats. The law demands that every motor boat shall carry, ready for immediate use, the means for promptly and effectually extinguishing burning gasoline. To fulfill this obligation, the fire extinguisher carried must be of a type approved for use on motor boats by the department.

At the present time, the extinguishers which satisfy the requirements are all of the foam or carbon-tetrachloride types. Though there was a time when powder extinguishers, a mixture of salt and sand, or dry sand alone, were regarded as satisfying the extinguisher requirements, these are no longer acceptable. To help in procuring a suitable extinguisher, the government has compiled a list of those which are effective in extinguishing burning gasoline. The list is published in Department Circular No. 236 and may be obtained from any customhouse. The wisest course for the owner of a motor boat is to procure a copy of this circular, and select from the list of approved extinguishers one that meets his needs and the state of his finances. The list gives the names and addresses of the manufacturers of the approved extinguishers and states the capacity of each.

Summary

The reader has now been fully informed as to the required equipment. There remain, however, two addi-

(*Continued on page 110*)

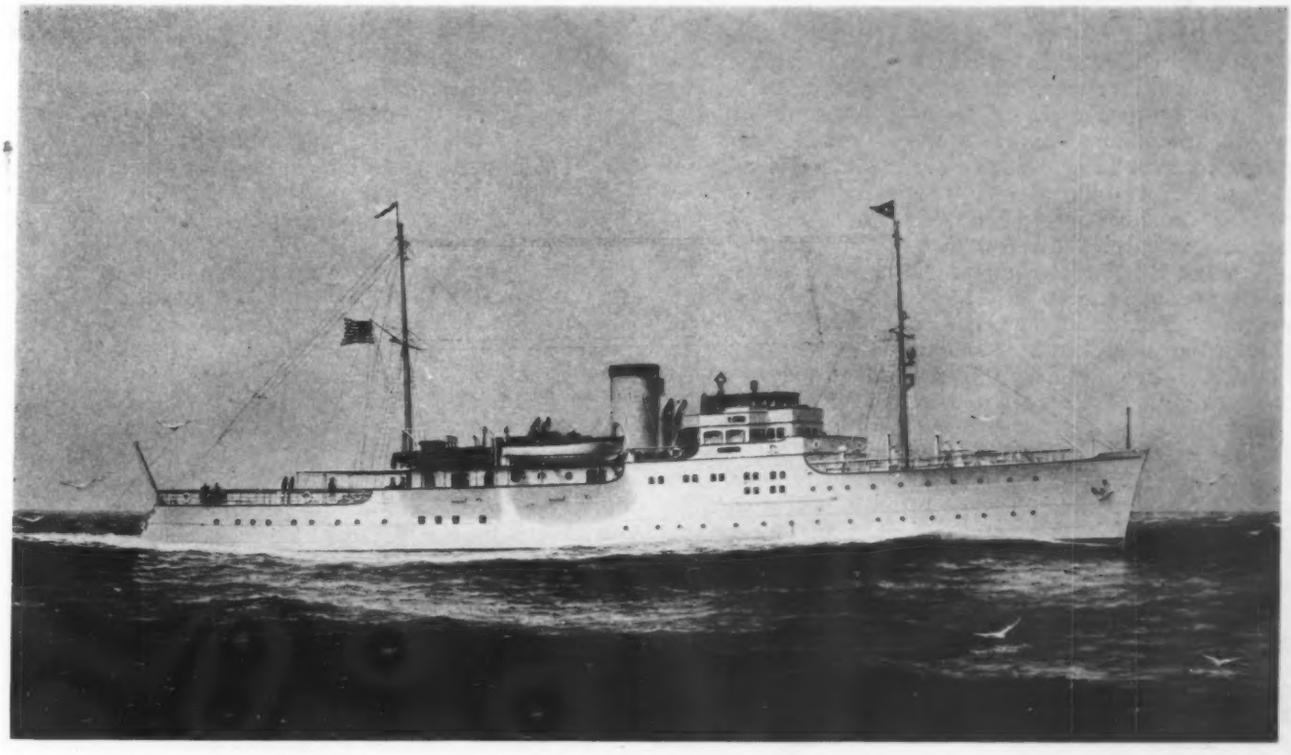
"Alva," A New Large Cruiser of Unusual Design

In his new cruiser "Alva," William K. Vanderbilt will have a yacht in which many features have been incorporated as the result of his long experience in offshore cruising. Designed by Cox & Stevens, Inc., for extended cruises in connection with scientific exploration work in which the owner is interested, "Alva" is 265 feet in length with a generous beam of 46 feet. She will be driven by two Diesel engines of 4200 total h.p., giving a speed of 16 knots and a cruising radius of 13,500 miles on one filling of her tanks.

The vessel is designed in excess of Lloyd's Commercial Rules and is classed 100-A-1. The hull contains a deep double bottom, full length, and unusual watertight subdivision has been arranged. Sufficient watertight steel bulkheads have been fitted so that any two of the watertight compartments may be flooded without endangering the safety of the ship. All watertight doors are operated by electricity and can be closed from the bridge.

The arrangement of public rooms is exceptionally interesting. The living room, which is the full width of the ship, is at the forward end of the deckhouse and extends a deck and a half in height, having a clear headroom of fifteen feet. The dining room, which is of large dimensions, is on the main deck, port side, nearly amidships, and just abaft the living room. The corresponding space on the starboard side will be arranged as an owner's deck lounge, with an extended view in all directions through large ports and windows.

The photograph at the right was made from a full model of the yacht, which is under construction abroad.



Transpacific Race Won by Schooner "Enchantress"

Light Winds Prevail on Long Passage to Hawaiian Islands

By HAROLD G. DILLINGHAM, JR.

SAILING with the sun over the great circle course from San Pedro to Honolulu, the yacht *Enchantress*, owned by Morgan Adams of Los Angeles, crossed the finish line off Diamond Head, Honolulu, at 10:52:52 on the evening of July 16th, winning the 1930 Transpacific race. The 136-foot *Enchantress* made the 2,227-mile passage in 12 days, 12 hours, 52 minutes, 52 seconds, thus failing to break *Mariner's* record, established in 1923, by 1 day, 1 hour, 46 minutes.

Three other yachts started — the ketch *Contender*, owned by Walter Horne; the *Talayha*, now owned by Lazard Lippman; and Dr. Floyd Swift's *Mollilou*. The yachts made Diamond Head in the order named, and the time allowance in effect did not change their relative positions.

Photos by W. C. Sawyer

Morgan Adams' "Enchantress," winner of the Transpacific Race, made the passage in 12 days, 12 hours, 52 minutes

The gun marking the start of the long passage from San Pedro to Diamond Head was fired at noon, July 4th. The bay was dotted with sails and we were surrounded by hooting, shrieking cruisers. At five minutes of twelve we were still quite a distance from the line. We tacked inshore, came about again, and the gun boomed. We were ten minutes late, last to cross the line. Ten minutes late on a 2,227-mile race, but the excitement was as keen as though it were only a 27-mile race. We set ourselves to catch the boats ahead.

Crossing the line at the end of the San Pedro breakwater we had to beat to the western end of Catalina Island, approximately twenty miles, with very light wind. A considerable fleet followed to this point. The *Talayha*, her lofty Marconi rig and three headsails looking like a vast pyramid, kept ahead of us.

At 4:25 p.m., with the western end of Catalina abeam, the log was streamed and departure taken. Sheets were eased and the course was set, S.W. by South. We were now overhauling *Talayha* rapidly, with *Contender* and *Mollilou* far astern. At 5:50 p.m. we passed *Talayha* about one-half mile to windward. Something seemed to go wrong with her mainsail after that, as it was lowered and not reset for almost an hour. By this time we were far ahead and it was getting dusk.

That first night out the wind was from the west, a stroke of fortune for us, as it had been decided to defy tradition and sail a great circle course if possible. Heretofore almost all courses for the Honolulu Race had been set to the southward to start, with the idea that the Trade winds are stronger in the southern latitudes. After studying all available wind charts Skipper Adams had decided to sail the shorter course, the difference in distance being approximately two hundred miles.

The *Talayha*, which we left behind just at dusk the first day out, was the last boat we saw until we glimpsed the lights of Inter-Island steamers in Molokai Channel more than twelve days later. Through all those golden days and moonlit nights the only living things we saw were a few birds and flying fish.

Midnight of the first day out, and we were logging an easy seven knots with the sea making up a bit. Our speed picked up rapidly. At the end of the first day we had made 200 miles. The wind increased. By the end of the second day we had made 279 miles more, and our run for the third day was 280 miles. The first three days out, and we had covered 779 miles, — over a third of the distance to Honolulu! A third of the distance, and going strong at better than eleven knots!

But our good luck was not for long. On the eighth of July, the fourth day out, the wind force began to drop and averaged less than three for the next 24 hours. That day our run dropped to 226 miles. The wind continued to decrease, and on the fifth day we made only 142 miles.

Our mileage continued to drop. On the sixth day out we made only 143 miles; on the seventh, 115; on the eighth, 136; on the ninth, 95; on the tenth, 90; on the eleventh, 166. On the twelfth day out, with greatly increasing winds, our speed picked up and we made 237 miles, leaving 98 miles to go from the noon of the last day until we should cross the finish line that evening.

The promised Trade winds did not materialize until we were a day and a half from Honolulu. On the evening of July 14th, 48 hours before we crossed the finish line, we picked up a little breeze, a light northeast Trade, which carried on until noon of the fifteenth. The breeze was accompanied by squalls and some rain. The wind gradually increased, buoying up our spirits. At 7:10 on the evening of the sixteenth, our twelfth day out, Makapuu Light was sighted bearing W. ½ S. At 9:15, steering W. by S., Diamond Head Light bore west and at 10:52:52, her great white sails gleaming in the glare of many searchlights, *Enchantress* finished.

Starting from San Pedro for Diamond Head, Honolulu, 2,227 miles away

Morgan Adams, skipper and owner of the *Enchantress*, has sailed his own boats since 1898, when at the age of ten years, he was the proud possessor of a flat-bottomed punt named *Lu-Lu*.

In the crew of 17 there were only three professional seamen, the others being high school and college boys who have sailed on the *Enchantress* for the past four years.

The *Enchantress* was built in 1912, from designs by Carey Smith, and was originally owned by William Iselin. She is 136 feet long, 100 feet on the water, 190 tons gross and has 11,000 square feet of canvas. The *Enchantress* sailed boat for boat against the *Elena* on Long Island Sound and in the King's Cup races, the *Elena* winning three times and the *Enchantress* twice.

Those aboard the four ships that participated in the race were greeted in Honolulu with traditional Hawaiian hospitality and *aloha*. The Pearl Harbor and Kaneohe Yacht clubs were in charge of the entertainment for the visiting yachtsmen and provided a week of festivity which included, among many delights, a huge *luau* (native feast) at Pearl Harbor. The visitors were enthusiastic in their enjoyment of the unique entertainment and the sports which Honolulu offers.

The International Six-Metre Team Match

AFTER a strenuous series of elimination races held the middle of August, the following four boats were selected to represent the United States in the team race against four British boats off Oyster Bay, which start on September 2nd:

Lucie, ex-*Akaba*, owned and sailed by Briggs Cunningham, designed by Clinton H. Crane and built in 1928.

Mars, a sister ship to *Lucie*, owned and sailed by Van S. Merle-Smith. Built in 1930.

Cherokee, owned by Herman F. Whiton, to be sailed by Corny Shields. Designed by Sparkman & Stephens. Built in 1930.

Aphrodite, owned by J. S. Johnson. Designed by, and will be sailed by, C. Sherman Hoyt. Built 1930.

The British team will consist of *Fintra*, *Felma*, *Coral* and *Prudence*. The first two are in their third season, *Coral* is in her second season, and *Prudence* is a new boat this year.

"Cherokee," selected as one of the American team for Six-Metre match. H. F. Whiton, owner

"Totem," a new Six-Metre owned by A. E. Luders, Jr. At her best in light weather

Class S and Victories racing in a hard breeze during Larchmont's Golden Jubilee Race Week

Golden Jubilee Race Week at Larchmont Great Success

Varied Weather, Big Fleets and Keen Competition Mark Banner Week in Long Island Sound Racing

By SAMUEL WETHERILL

WITH big fleets gathered for the start on every day of the Golden Jubilee Race Week of the Larchmont Yacht Club, the weather man smiled and produced varied winds of sufficient strength to get the boats around the courses in good time every day, and keen competition in all the classes was the result. A total of 1286 starters was registered, the biggest day seeing 241 starters, and while this number fell a bit short of the record made in 1929, it was hardly noticeable to even keen observers, and the procession of snowy sails dotting the horizon every day was ample proof that the day of sail was in full bloom.

The weather man was unusually kind to the racing contingent, for not only did he provide wind enough for all classes to finish within the time limit on each day — with the exception of two classes in the opening race — but produced enough variety to suit the most particular. The average breeze, true enough, was light to moderate, from both the westerly and easterly quadrants. But on one day, after the committee had hoisted shortened course signals on account of a light breeze, the wind suddenly piped up out of the west and blew a good 40-miler, resulting in several masts going by the board, sails being ripped, and rigging being carried away. On another day, after nearly completing the course, a blinding rainstorm, accompanied by a reef breeze, descended upon the fleet, the rain being so heavy that the finishers were hardly discernible from the committee boat, and several craft lost their way as though in a fog.

Although disqualified in one race, George F. Pynchon had *Istalena* going so well that the big double-ender, sometimes dubbed "the cleat," squeezed in a point ahead of Floyd L. Carlisle's *Avatar* for the series prize in Class M. Clifford D. Mallory once more spreadeagled

The Stars got all they wanted when it blew hard. Several were dismasted and had sails torn

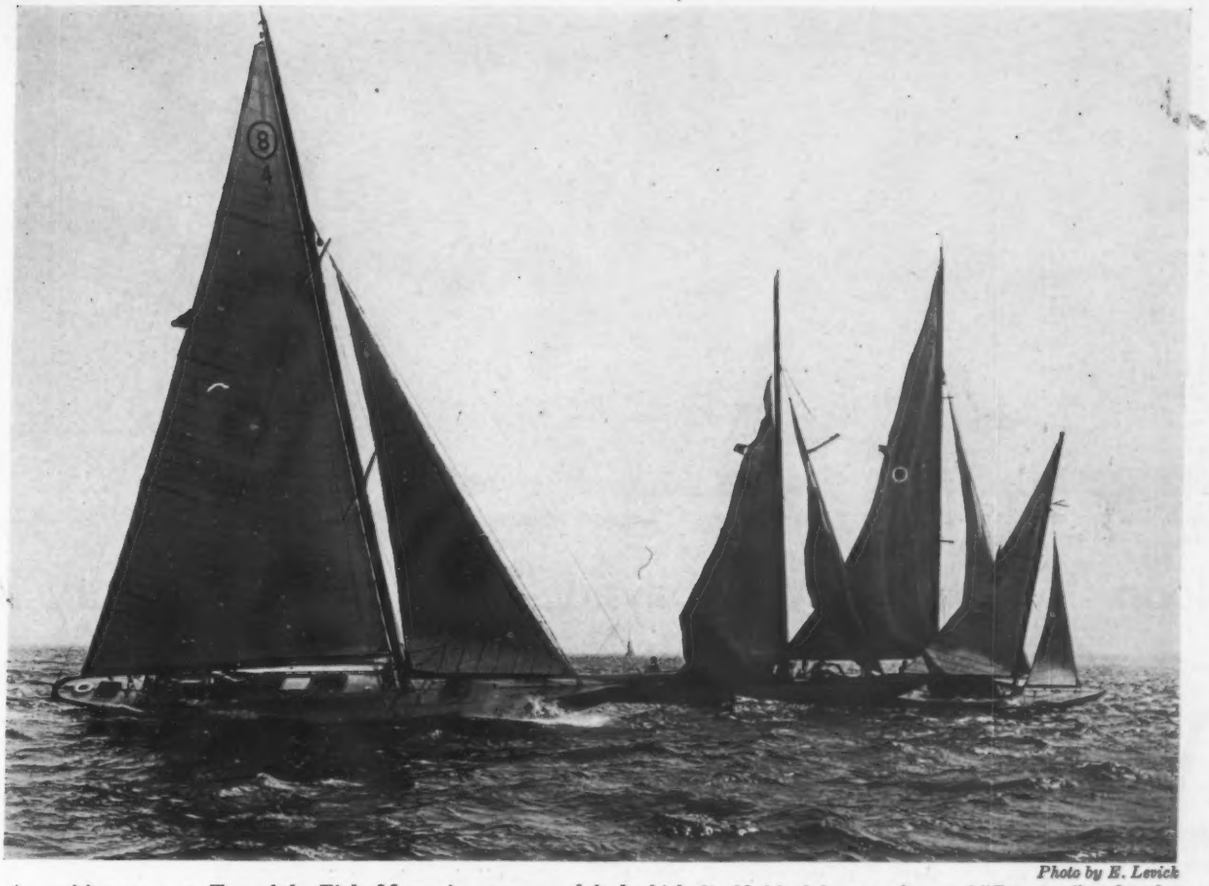


Photo by E. Levick

An exciting moment. Two of the Eight-Metres in an unusual foul which disabled both boats and caused "Rangoon" to lose her masthead. The little Atlantic Coast boat got clear

the 12-metres with *Tycoon*, and Bob Mahlstedt again romped in for first honors in the Larchmont O Class with *Mirage*. W. B. Bell's 40-footer *Mistral*, with Fred Bradley at the helm, easily defeated the other New York Y. C. 40-footers, and again Frank Page showed the way to the 10-metre class. Johnston DeForest held complete sway in the 8-metre open class, while *Roulette II* took the honors in the one-design 8's. Gordon Curry led Class R with *Gypsy*, while Briggs Cunningham continued his string of successes in the 6-metre class with *Lucie*, ex-*Akaba*. *Aphrodite*, *Mars*, *Cherokee* and *Totem* were some of the new "Sixes" which made good showings.

The Sound Interclubs had it out hot and heavy as usual, with Corny Shields squeezing out a victory by a single point over *Alberta*, owned by Lawrence Marks, with *Bozo* and *Bobbill* always in the running. A protest decision pending between *Alberta* and *Bobbill* will affect the standing of these two boats.

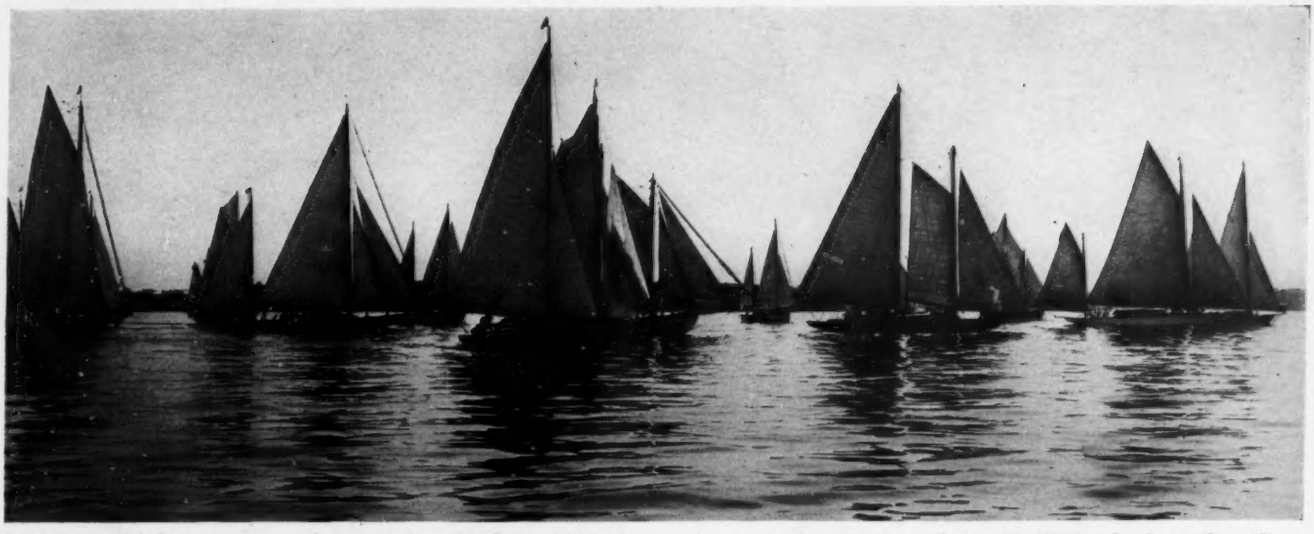
Flash, owned by O. Schmeltzer, and sailed by Lorna Whittlesey, now graduated from the juniors, whittled out a victory in the Atlantic Coast Class from *Rumone* by consistent showings each day. *Madame* eased in ahead of *Flapper* in the Victories, while Bob Reybine defeated a classy field of Stars with *Orion*.

Protests were not nearly so numerous as last year. One highly unfortunate and unusual collision occurred at the finish of Monday's race when, in a two-reef breeze, the two 8-metre boats, *Nymph* and *Rangoon*, collided with Porter Buck's Atlantic Coast boat *Gretal*. Both 8-metres were disqualified as the result of a situation so unusual that the Protest Committee sprouted numerous gray hairs before they were able to reach a decision.

The hard-working race committee, under the able leadership of Chairman Alfred G. Keeshan, handled the big regattas with conspicuous success, showing especially good judgment in reversing and shortening courses at various times. The presence of the *U. S. S. Marblehead* added interest to the many social events ashore, the various entertainments were excellently attended and thoroughly enjoyed, so that Larchmont Race Week of 1930 set a high water mark which will be difficult to surpass in years to come.

POINT SCORE, LARCHMONT RACE WEEK

CLASS M. *Istalena* 13, *Avatar* 12, *Simba* 10
12-METRES. *Tycoon* 16, *Anitra* 10
LARCHMONT O. *Mirage* 23, *Grey Dawn* 17, *Varuna* 9
40-FOOTERS. *Mistral* 42, *Rowdy* 33, *Katharine* 30, *Shawara* 29
10-METRES. *Narcissus* 46, *Nautilus* 41, *Synthetic* 40, *Dragon* 40, *Nachvak* 39
8-METRE OPEN. *Priscilla III* 41, *Gitane* 30, *Angelita* 25
8-METRE ONE-DESIGN. *Roulette III* 16, *Nymph* 11
CLASS R. *Gypsy* 44, *Cotton Blossom* 36, *Fifi* 33, *Robin* 31
6-METRES. *Lucie* 77, *Aphrodite* 66, *Mars* 66, *Cherokee* 65, *Totem* 60, *Roulette II* 53, *Mist* 41
CLASS S. *Aurora* 28, *Felicity* 26, *Lark* 22
SOUND INTERCLUBS. *Aileen* 128, *Alberta* 127, *Bozo* 119, *Bobbill* 109, *Revonoc* 107, *Ermar* 101
VICTORY CLASS. *Madame* 75, *Flapper* 72, *Reveille* 66, *Allouette* 55, *Red Arrow* 52
ATLANTIC COAST. *Flash* 186, *Rumone* 182, *Mistral* 181, *Ellyn* 148, *Gretal* 137, *Pippa* 129
STARS. *Orion* 123, *Little Bear* 118, *Vesta* 110
1ST DIVISION HANDICAP. *Alsumar* 24, *Young Miss* 23
2ND DIVISION HANDICAP. *Vitessa* 55, *Ethel II* 46, *Hawk* 45
SOUND JUNIORS. *Sabalo* and *Decima* 28, *No. 6* 27, *No. 4* 25
INDIAN HARBOR PIRATES. *Galvez* 32, *Loot* 27, *Hobo* 26, *Billy Bones* 26



With engines ready to turn over at the gun, a fleet of 36 boats drifted down on the starting line for the tenth Bayside-Block Island Auxiliary Race

Sloop "Mischief" Wins Bayside-Block Island Auxiliary Race

Record Fleet Covers 220-Mile Course in Fast Time

WITH 42 entries and 36 actual starters, the tenth annual Bayside-Block Island Auxiliary Race, sponsored by the Bayside Yacht Club, of Bayside, Long Island, broke all records for events of this character when the big fleet got away at 2.00 P.M. on August 1st. The winner turned up in H. H. Brewster's fast Herreshoff 37-foot sloop *Mischief* —one of the well-known Newport 29-footers — which finished in tenth position, winning on corrected time by some 50 minutes over last year's winner, J. W. Ripley's schooner *Kumalong*, of moonraker fame. *Mischief* not only won the handsome Johns Trophy, but also won the trophy offered by YACHTING for the first boat to finish on corrected time in the class of boats not over 40 feet over all length. R. D. Teller's yawl *Playmate*, a former winner, took third money.

The fleet started in practically a calm, and motors were turned on at the bark of the starting gun. Down near Matinicock a southerly breeze made its appearance and lasted practically all night, though it lightened enough at times so that many boats again started their motors. It was pretty calm going to and around Block Island from Plum Gut or the Race. Then a real sou'wester came in, and the fleet was hard on the port tack all the way back to Bayside. Saturday afternoon and night it blew between 25 and 30 miles an hour for several hours, and close to 35 in the puffs, kicking up quite a sea for the Sound. Then it moderated some time after midnight and blew a nice easy southerly to the finish.

Commodore J. W. Ripley's "Kumalong," could not "repeat" this year in spite of the "moonraker." Another sail, called the "heavenly peeper," was set this year from the yardarm to the tip of the topsail sprit

The first boat to finish, H. D. Merwin's big schooner *Dauntless*, crossed the finish line just before midnight on Saturday. George B. Drake's schooner *Tigress* followed an hour later, when arrivals began to come in thick and fast.

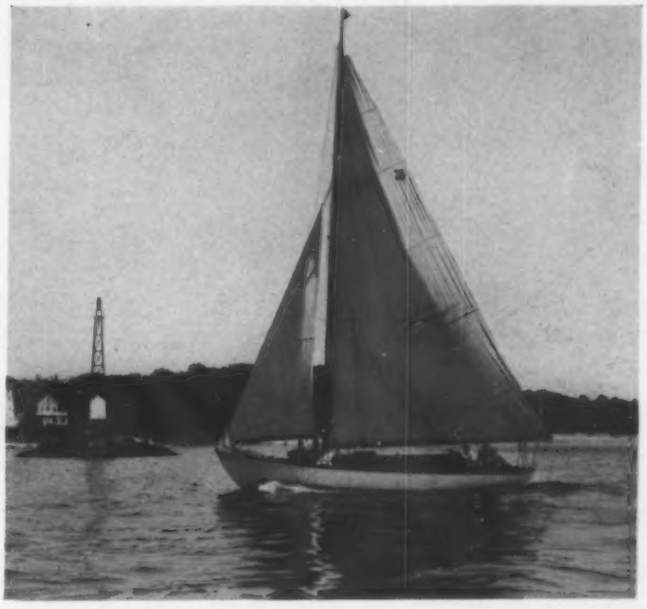
The blow on Saturday night caused a lot of grief among the fleet. Rigging carried away, sails were split, and some of the boats leaked. The smaller craft were decidedly wet and uncomfortable, and several of them, unable to make any appreciable progress in the big seas, gave up the race and anchored in some convenient harbor.

The dinner preceding the race was excellently attended by the skippers and crews with the genial ex-Commodore Johns handling the proceedings in his usual humorous style.

Following is the summary:

Boat, owner and club	Finish Sunday	Position at finish	Corrected time
Mischief, H. H. Brewster, New Bedford	4:25:11 A.M.	10	27:39:31
Kumalong, J. W. Ripley, Bayside	2:24:00 A.M.	5	28:29:00
Playmate, R. D. Teller, Bayside	1:56:00 A.M.	4	28:53:48
Janet, W. H. and A. K. Hamilton, Pine Orchard	1:35:00 A.M.	3	29:16:21
Gleam, C. V. Kozlay, Larchmont	2:56:20 A.M.	7	29:33:18
Tidal Wave, S. Wetherill, Larchmont	8:28:02 A.M.	15	29:41:26
Northern Light, E. P. Bullard, Sachem's Head	4:22:03 A.M.	9	30:02:03
Tigress, G. B. Drake, Bayside	12:50:30 A.M.	2	30:22:06
Rissa, S. Dehart, Harlem	2:51:00 A.M.	6	30:28:36
Constance, L. Holly, Southport	6:25:18 A.M.	12	30:40:54
Harbinger, G. Munroe, Savin Hill	7:56:56 A.M.	13	30:51:56
Dauntless, H. D. Merwin, Black Rock	*11:51:00 P.M.	1	31:25:01
Wild Goose, C. B. Rockwell, Bristol	4:30:12 A.M.	11	31:27:24
Rumpus, J. E. Shaw, New York	4:10:23 A.M.	8	31:51:41
Nellie H., G. E. Hempstead, Knickerbocker	8:22:37 A.M.	14	33:51:01
Dragon, P. S. Patton, Larchmont	11:18:40 A.M.	18	34:30:30
Idler, H. Kilmer, Larchmont	9:22:20 A.M.	16	35:06:44
Nadrey II, F. W. Wright, Manhasset	11:08:50 A.M.	17	36:02:14
Sagola, W. A. Drisler, American	12:13:33 P.M.	19	37:00:09
Markay, T. S. Dunstan, Cedarhurst	1:41:46 P.M.	20	38:30:22
Gulnare, L. R. Freeman	6:09:00 P.M.	22	40:35:12
Adelante, F. C. Geiger	7:52:00 P.M.	25	41:09:00
Norseman, H. Starke	4:59:20 P.M.	21	41:18:20
Camilla, Otto Harbeck	6:30:30 P.M.	24	42:30:30
Trump, I. D. Jacobsen	8:55:00 P.M.	26	42:58:24
Tinker, F. Sturgess, III	10:00:00 P.M.	27	43:10:00
Curlew, D. Rosenstein	6:11:30 P.M.	23	44:39:42

*Finished Saturday.



"Mischief," H. H. Brewster's little sloop from New Bedford, beat all other starters by some 50 minutes on corrected time to take both the Johns and the YACHTING *Trophies*

R. D. Teller sailed a fine race in "Playmate" and took third prize

PRIZE WINNERS

Wm. H. Johns Trophy, *Mischief*.
YACHTING Trophy, *Mischief*.
Second prize, *Kumalong*.
Third prize, *Playmate*.
Fourth prize, *Janet*.
Fifth prize, *Gleam*.
Sixth prize, *Tidal Wave*.
Commodore Moore prize, for first boat to finish, *Dauntless*.
Prize for last boat to finish, *Tinker*.

Long Island Sound Sailors Win Both the Manhasset Cup and the Ladies' Plate Series from Eastern Tars

AFTER several unsuccessful attempts, Long Island Sound sailors have at last been successful in handing decisive defeats to the Marblehead sailors and bringing to the Sound the two coveted trophies — the Manhasset Challenge Cup and the Ladies' Plate. The Class R yacht *Gypsy*, owned by Howard Curry, of the Manhasset Bay Yacht Club, was the craft which won the series for the Manhasset Cup, while Johnston DeForest's Eight-Metre *Priscilla III* took first honors in the series for the Ladies' Plate. *Cotton Blossom*, owned by W. Wheeler, Jr., of the Stamford Y. C., and *Robin*, owned by C. L. Farrand, of the Larchmont Yacht Club, were close behind *Gypsy*, while the Marblehead representatives, *Tabasco V*, H. H. Wiggin, of Annisquam, *Live Yankee*, J. P. Morgan, Corinthian Y. C., *Taja*, C. Liffler, Jr., Eastern Point Y. C., *Bonnie Prince*, J. Stuart, Jr., Pleon Y. C., and *Mary*, C. D. Alexander, Portland Y. C., brought up the rear of the procession.

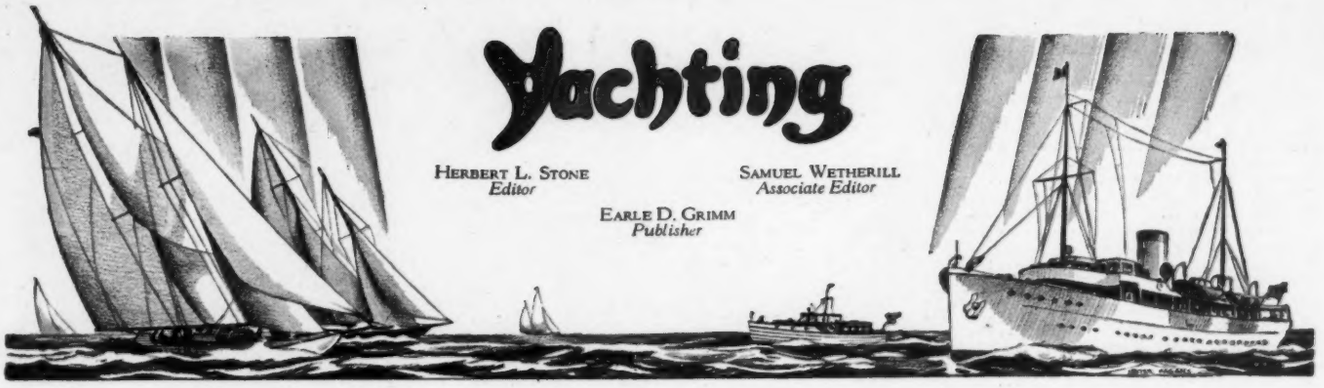
In the Ladies' Plate races, *Priscilla III* was followed by W. D. Aldrich's *Armida*, Henry S. Morgan's *Gitane*, formerly *Gypsy*, John M. Elliot's *Balek*, C. P. Curtis's *Ellen*, S. C. Steinhardt's *Psyche* and Robert A. Leeson's *Amethyst*.

Following are the point scores:

MANHASSET CUP: *Gypsy*, 25; *Cotton Blossom*, 24; *Robin*, 23; *Tabasco V* and *Live Yankee*, 14; *Taja* and *Connie*, 11; *Bonnie Prince*, 8; *Mary*, 6.

LADIES' PLATE: *Priscilla III*, 28; *Armida*, 27; *Gitane*, 25; *Balek*, 17; *Ellen* and *Psyche*, 16; *Amethyst*, 11.

As the point score shows, the racing for both trophies was extremely close, and not until the final leg of the final race in each series was the winner determined. Varied weather conditions were met, with light and fluky winds predominating, conditions under which the Long Island Sound tars were quite at home.



Yachting

HERBERT L. STONE
Editor

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EDITORIAL

All Set!

WITH the safe arrival of *Shamrock V* at New London on August 13th, and the final races for the selection of her opponent only a few days off, America's Cup affairs are starting on the last lap of the long course that will end with the final race off Newport the latter part of September. Then, and only then, will we know whether the Cup which we have held for seventy-nine years is to stay here or go back to Great Britain in the locker of the green cutter which carries the colors of Sir Thomas Lipton. And whether it goes or stays, we can look forward with assurance to a race marked by a spirit of fair play and sportsmanship beyond that seen in any other match for the Cup.

The challenger arrived in the best of shape after a passage lasting just short of a month, and showing no sign of strain to her hull. Not even a seam showed, it is said. A month's hard work in getting back to racing form faced her crew, but they went at the job with a will, and she was under sail only a week after her arrival. In connection with her tuning up, it is to be regretted that Sir Thomas Lipton's representatives did not accept (as reported at the time this is written) the offer made them by the owners of *Resolute* and *Vanitie* to use one of these 1920 Cup yachts as a trial horse in helping to get their boat back into racing form. Getting such a sensitive thing as a Cup yacht back to top form is always a difficult matter, but surely it can be done more effectively with another boat alongside, by which to measure the result of different adjustments and changes. There is no reason for making the task more difficult than it need be.

Sir Thomas Lipton, Challenger

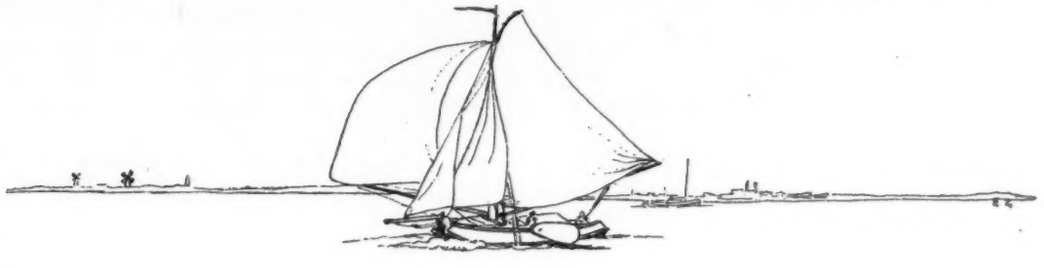
FOLLOWING the arrival of his challenger *Shamrock V* by only a few days, Sir Thomas Lipton received a welcome here which must have been a satisfaction to one making his fifth attempt to capture a Cup on which he has unquestionably set his heart. There is no doubt as to his sincerity in his quest, or as to his popularity with the American public. His persistence over a period of thirty-one years in trying to capture the Cup, his sportsmanlike spirit in the face of continued defeat, and his optimism as regards the ultimate fulfilment of his desire have appealed to the popular imagination. Never has he complained of defeat; never has he intimated that the conditions were not fair. Which is more than can be said for several of the challengers that preceded him. And now, at the age of eighty years (he was one year old when the *America* won the Cup in 1851), he comes back full of hope for his latest attempt.

While in no sense a practical yachtsman, Sir Thomas has for many years been one of the main supporters of large yacht racing in England, where he has kept a large cutter in commission each summer. He has, as well, been the donor of many trophies for the encouragement of yacht sailing, both in this country and at home. These cups have done much to stimulate the sport, and in many yachting localities they are the most coveted of racing trophies. He has "done his bit" for the sport in which he takes so keen an interest.

The Canada's Cup Stays at Rochester

PERHAPS the most gratifying feature of the series of races on Lake Ontario for the Canada's Cup was the fine spirit shown by both contenders in a hard fought series that was not decided until the last few miles of the fifth race, which the yachts entered even up. After a lapse of twenty-three years, following a match that unfortunately resulted in considerable misunderstanding and ill feeling, the sailors of Canada and the United States met in a manner which has dispelled any trace of resentment that might have persisted.

From start to finish the match was well sailed. The boats were evenly matched. Weather conditions were as fair as they ever can be in a yacht race, with the breaks evenly distributed, except perhaps when the defender was dismasted in the second race. All of which is as it should be. And as a result of the renewal of these contests the Great Lakes has a new class of yachts which should prove popular and which should do much to stimulate yachting on fresh water. Six Eight-Metre boats are already on Lake Ontario as a result of the Canada's Cup series. Yachtsmen on the other lakes are contemplating building or buying in the class, and the future for both international and intersectional racing seems brighter as a result of this match.



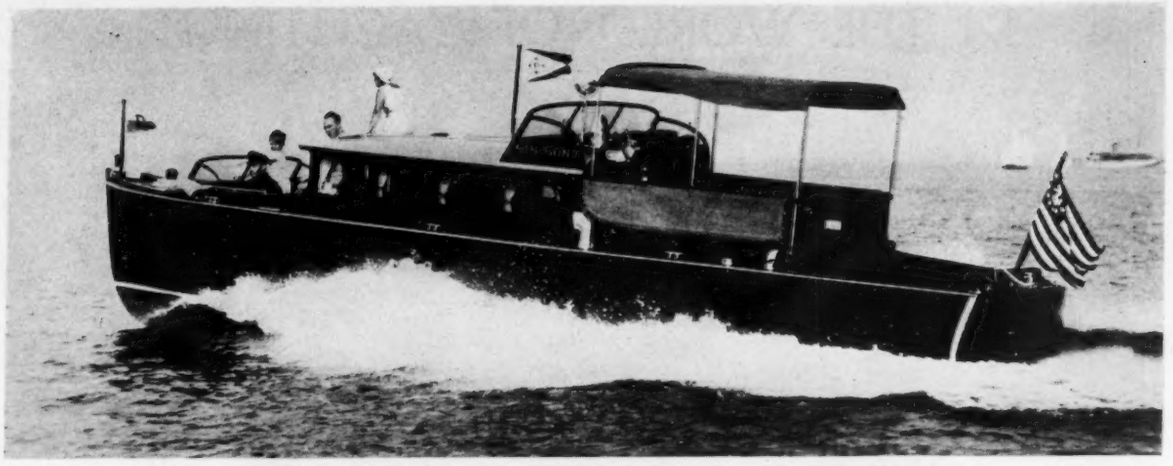
IN THE WORLD OF YACHTING

RAYMOND W. FERRIS

TO WIN in his class in the Bermuda Race one year and to repeat in the very next race by winning the Bermuda Trophy for all classes in a 45-foot schooner is no mean achievement. Yet that is what Raymond W. Ferris did in his little "Malay" in 1928 and 1930. It was "Malay's" third trip to the Islands, and so highly are the little boat and her skipper regarded that it is the general opinion of those that have sailed against her that she might have finished "in the money" on her first trip had not an error by her navigator in locating elusive St. David's Head taken the "Malay" too far to the southward. "Malay," designed by W. J. Roué, of Halifax, is certainly a smart little craft, but her skipper and crew must have driven her hard and used the best of judgment to land her at the top twice.

Mr. Ferris has done most of his sailing "Down East," if we except the Bermuda and the Gibson Island races. He makes his headquarters at Gloucester and Marblehead during the sailing season, though he himself hails from Akron, Ohio. And when it comes to long distance racing, he and the "Malay" are usually found at the starting line. In 1905 he won a race from New York to Marblehead for the Rudder Cup, and he took first place in the Portland Yacht Club's ocean race of 1929, and in the Boston Yacht Club's race of the year before. In 1927 he took a second in the New Rochelle-New London Race. All of which is quite a record for blue water racing.

Mr. Ferris is a member of the Cruising Club of America, the Corinthian Yacht Club of Marblehead, and the Royal Nova Scotia Yacht Squadron.



"Sis-Son III," E. W. Parcell's new Chris-Craft cruiser watching the start of the Port Huron-Mackinac Race of the Bayview Yacht Club, Detroit

THE MONTH IN YACHTING

Johnson Brothers Win Star Class Series on the Chesapeake

THE fifth annual series for the Chesapeake Bay Lipton Trophy, held in trust by the Chesapeake Bay Yacht Club, of Easton, Md., was sailed July 19th and 20th, off Claiborne, Md., in Eastern Bay, a branch of the Chesapeake.

For the third time the trophy was won by J. Graham and C. Lowndes Johnson, of Easton, Md., the present international champions of the Star Class. The Johnsons have their third Star this year and judging from her performances she is faster than either of her predecessors. *Ripple* is the new Star's name and she moves along with as little effort as one of her namesakes.

Ripple's victory in the series was decisive, being gained by two firsts and a second, J. Rulon Miller, Jr., of the Gibson Island Club, taking first place in the first race with *Sole*. Miller was second on points in the series, while Sifford Pearre placed third with *Bluefish*, despite the fact that he drifted on to the outer mark in a calm during the third race and withdrew.

The Johnsons were sailing with the new rig for the first time, *Ripple* having gone into the water with the old rig with which, incidentally, she proved good enough to win the first two races of the elimination series in the Chesapeake Bay Fleet. At this writing it appears more than a probability that she will defend the international championship won by her predecessor *Eel* at New Orleans last fall. The second and third sloops in series standing also carried the new rigs. The following shows the point scoring: *Ripple*, 44; *Sole*, 40; *Bluefish*, 27; *Juno*, 25; *Eel*, 24; *Cyganus*, 22; *Fawn*, 22; *Dipper*, 21; *Pegasus*, 21; *Urchin*, 18; *Pickerel*, 16; *Gar*, 11; *Alondra*, 11; *Lone Wolf*, 7; *Pansy*, 4.

Ray Pregenzer in his "Century Hurricane" in which he made a world's record of 49.723 m. p. h., powered with a "four-sixty" motor

Annual Regatta Sailed on Miles River

THE ninth annual regatta of the Miles River Yacht Club was held Friday and Saturday, August 8th and 9th at St. Michaels, Md. The results were as follows:

Free-for-all Chesapeake Sailing Championship: Won by *Vingt Trois*, J. Graham and C. Lowndes Johnson, Easton, Md.; second, *Magic*, George Wilson; third, *Toodes*, John J. Raskob, Jr.

St. Michaels Scow (sloop-rigged): Won by the *Unhurrying Chase*, sailed by Grace Hawkins.

St. Michaels Scow (Marconi-rigged): Won by the *Terrified Hare*, sailed by Ethel French; second, *Gold Bug*, sailed by Alice Cockey; third, *Elinore*, sailed by William Harrison; fourth, *Green Dragon*, sailed by M. C. Cockey.

Scow (free-for-all): Won by *Eventually*, sailed by James Lavery; second, *Hoodoo*, sailed by W. B. Matthews; third, *Maybe*, sailed by Charles Stevenson.

Knockabout: Won by *Clair de Lune*, sailed by C. J. Lipscomb; second, *Surprise*, sailed by R. Ramsay Speer; third, *Skelk*, sailed by Frank Fuller.

Free-for-all cruiser race: Won by *Raggedy Anne*, by W. A. Starrett, of the Maryland Yacht Club. Edwin Kaiser, of the Maryland Yacht Club, was second, and T. W. Nicolet third with the *Janetill*.

Chesapeake Bay Log Sailing Canoes (Governor's Cup). Won by *Mary Rider*, William H. Green, Miles River Yacht Club.

Star Class: Won by *Ripple*, J. Graham Johnson.

Barnegat Bay Sneakboxes: Won by *Yo Yo*, R. Hynson Rogers, Chester River Yacht and Country Club, Chestertown, Md.

Bell Class: Won by *Clara Bell*, William Adams, Corinthian Yacht Club of Baltimore.

Unlimited Outboards: Won by *Spirit of Green Pond*, Frank White; second, *Sea Dog*.

Ladies' Free-for-all: Won by *Pep II*, Mrs. Guy Delahay; second, *Heathen*, Jacqueline Densten.

110 h.p. Runabouts: Won by *This 'll Duit*, John J. Raskob, Jr.; second, *Senorita*, J. Boorhees.

Class B Outboards: Won by *Flying Fish*, William Dew.

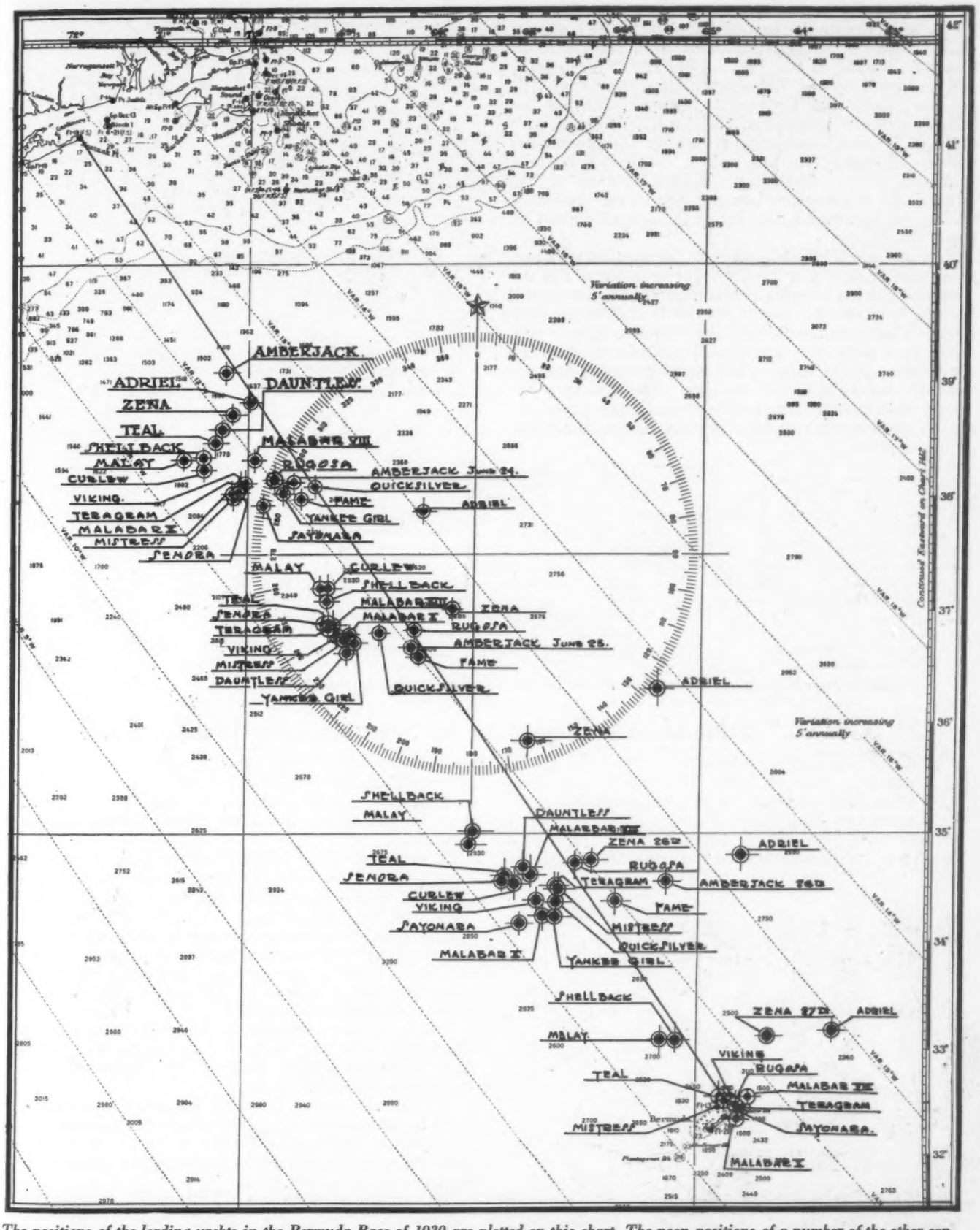
Class C Outboards: Won by *Shooting Star*, C. M. Scull.

Class D Outboards: Won by *Shooting Star*, C. M. Scull; second, *Hurry*, Lee Washington.

Family Outboards: Won by *Hannah*, Earl Van Sciver.

GEORGE H. ENGEMAN.

How the Bermuda Race Was Sailed

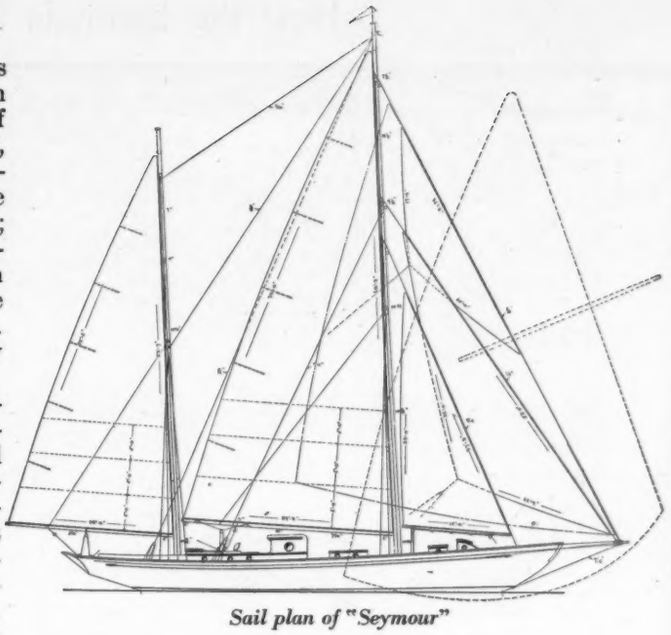


The positions of the leading yachts in the Bermuda Race of 1930 are plotted on this chart. The noon positions of a number of the other contestants were received, but room could not be found to plot them on the chart. Also, no positions were received from a number of the boats. As a rule, the leaders were well bunched each day. The majority kept to the westward of the rhumb line course, and in the prevailing conditions, west to southwest winds, these did the best. Those that got to the eastward were out of luck

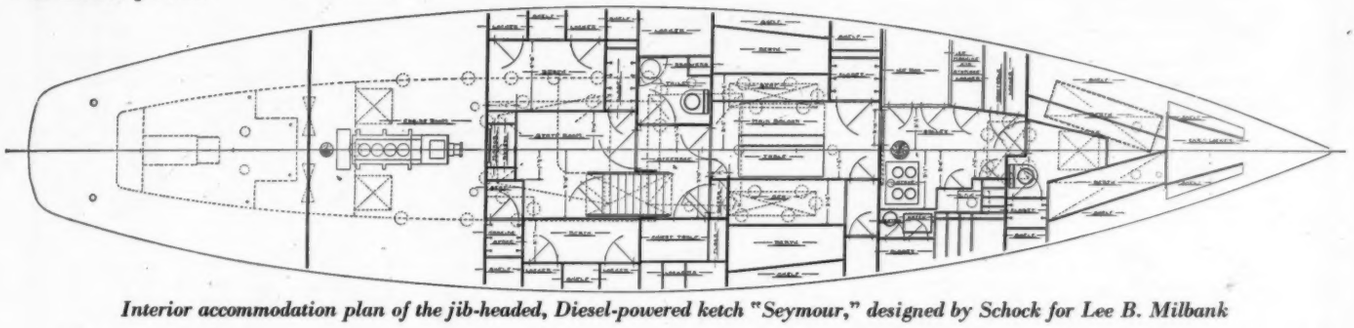
A Diesel Auxiliary Ketch

ONE of the first of the Diesel-powered auxiliaries of moderate size to make its appearance is shown in the accompanying plans from the board of Edson B. Schock, of Los Angeles. She is called *Seymour*, and was built by the Wilmington Boat Works, of Wilmington, California, for Lee B. Milbank. She has the following dimensions: l.o.a. 70′; l.w.l. 50′; beam, 16′; draft, 9′ 6″, and a moderate rig which has proven decidedly efficient. The motor is a 4-cylinder Eastern Standard Diesel, 40-60 h.p., placed forward of the mizzen, the mizzenmast being stepped over the shaft. The engine is reversed, and drives the propeller shaft by silent chain.

Seymour was designed and built for comfort and seagoing ability, and has lived up to the hopes of her designer and owner in every particular. She has a powerful hull, with moderate, well-turned ends and ample freeboard. The accommodations are simple and very spacious, consisting of a large double stateroom aft, toilet room, chart room, large galley and forecastle, and unusual locker, storage and tank space. The different combinations of shortened sail have proved a great comfort, and *Seymour* performs well in any weather, either sailing or under power.



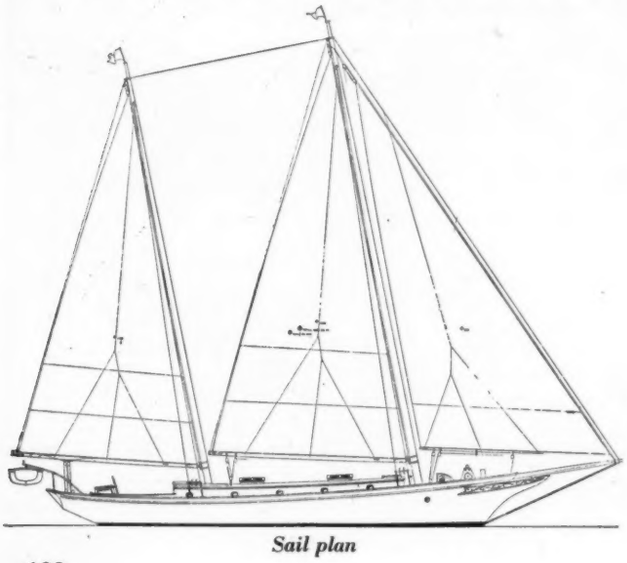
Sail plan of "Seymour"



Interior accommodation plan of the jib-headed, Diesel-powered ketch "Seymour," designed by Schock for Lee B. Milbank

"Orithia," a Handsome Bugeye to be Seen on Long Island Sound

CRUISING men from the haunts of the Chesapeake will feel quite at home on Long Island Sound when they run across *Orithia*, a handsome bugeye-yacht owned by Haliburton Fales, of New York City. She was designed by P. L. Rhodes, naval architect of New York, and completed last spring by M. M. Davis & Sons, of Solomon's Island, Md., her dimensions being as follows: l.o.a. 61′ 7″; l.w.l. 46′ 10″; beam, 16′; draft, without board, 4′ 6″; sails by Burrows of 1580 sq. ft. Her 40 h.p. Lathrop kicks her along at better than an 8-mile clip.



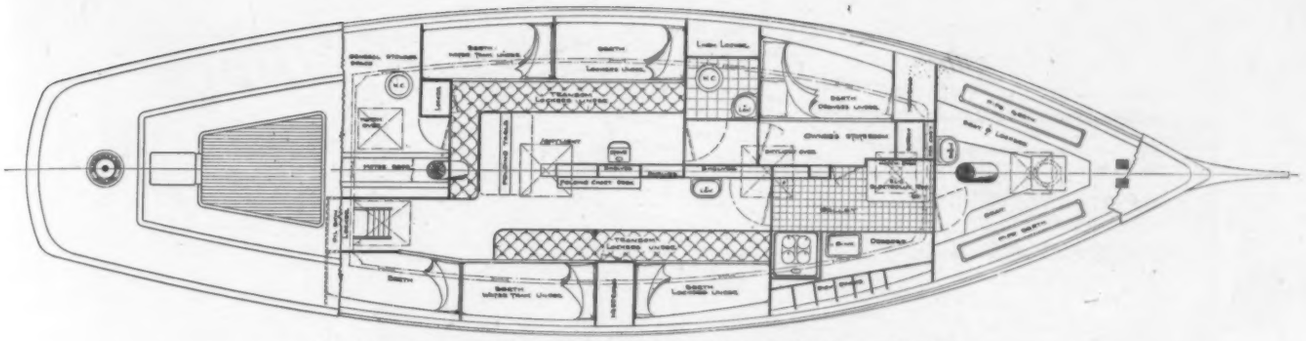
Sail plan

In design, the bow follows bugeye lines, though the stern is more like the conventional transom stern. The ketch rig, with raking spars and big single jib, is distinctly of the bugeye type. This rig, with but three halliards and no backstays, is sure to attract the attention of yachtsmen to whom handiness appeals as a virtue. In addition to the working rig, *Orithia* carries two huge light sails, a balloon jib and mizzen staysail, larger in area than the working sails.

Orithia is very ruggedly built, double planked with mahogany, with teak decks and mahogany trim outside and in. An interesting item of her equipment is an Electrolux refrigerating plant.

The interior arrangement is unusual, the main features being an owner's stateroom and a huge main saloon, the latter having five built-in berths. Two toilet rooms, a large galley and good forecastle complete a layout which is large, airy and attractive.

The engine room is located aft, on the port side of the companionway, in a separate compartment, with an entrance from the deck. Another interesting touch are the stern davits for carrying the tender or dinghy.

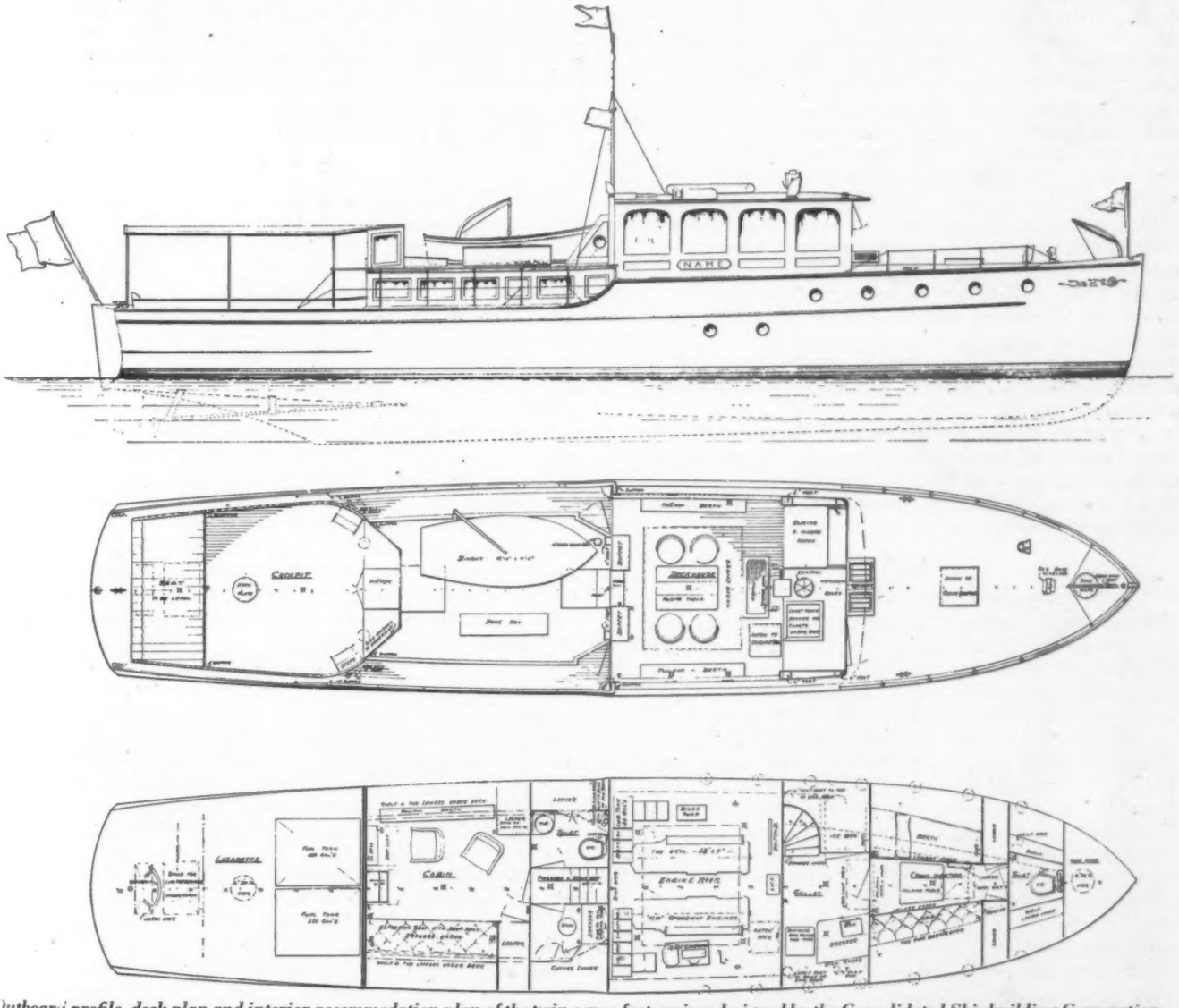


Interior accommodation plan of "Orithia," described on preceding page

A Fast and Comfortable 60-Footer by Consolidated

THE pleasing profile and all-around attractiveness of the 60-foot fast cruiser shown below are sure to appeal to the yachtsman of discrimination. Add to this excellence of construction and elegance of finish and appointments, a speed of 23 miles an hour, and there is little left to be desired. She is from the board of the Consolidated Shipbuilding Corporation, of Morris Heights, New York City, and is powered with a pair of 180 h.p. Speedways, noted for their power, ruggedness and dependability.

The enclosed deckhouse is quite comfortable, and fitted with two Pullman berths. The after cockpit is a splendid lounging place in fair weather. The main cabin has chairs and a sofa, and two berths, with toilet room and large clothes locker adjoining. A good galley, forecastle, and crew's toilet are located forward.



Outboard profile, deck plan and interior accommodation plan of the twin screw fast cruiser designed by the Consolidated Shipbuilding Corporation, of New York

Under the Lee of the Longboat

by Cap Stan

AS THIS is being written the four aspirants for the defense of the America's Cup have fought it out in their first series of trial races off Newport, and are now engaged in a tussle on the New York Yacht Club Cruise, with the final elimination races yet to come. To date, "Nat" Herreshoff's prophecy that the small boats would be the fastest has been proved correct. *Whirlwind*, the largest of the four, seems definitely out of it — too big a boat for the sail area. *Yankee*, next in size, is better than *Whirlwind*, but needs a real breeze to get going, being slower than either *Weetamoe* or *Enterprise* in light and moderate going. The latter two seem very close, both in size and performance, with *Weetamoe* having a slight edge. *Enterprise* may come through in the final trials, but at this moment my bet goes down on *Weetamoe*. Hunch-players should give odds on her — for over 30 years every defender has had a name composed of eight letters — *Defender*, *Columbia*, *Reliance*, *Resolute*. So has *Weetamoe* — and the other aspirants haven't.

And as to size, don't forget that *Shamrock* is mighty close to both *Weetamoe* and *Enterprise*. No matter which of the latter is chosen as defender, the cup races promise to be close and thrilling. Good luck to *Shamrock*, and may the best boat win.

\+ + +

The Skipper penned a mighty interesting picture of the Bermuda Race in the last number, and an accurate one except in one particular. There certainly *was* a Battle of Montauk this year, as well as in five of the last six races which started from New London. This year, *Viking* led *Teragram* by a scant two boat-lengths at the Point. Abreast of Montauk they both ran into a pocket, and wallowed there for some ten minutes while the fleet behind roared up on them. Three or four boats hung close to the point and ran through the calm quickly. *Viking* got a breath of air, and eased out a half-mile lead on *Teragram* before the latter got going. Some of the boats behind got stuck a full half-hour before they gathered steerageway. A few boats lost five or ten minutes on the fleet, others lost half an hour, while a few gained valuable distance. You can't get away from it, Montauk Point is a fluke-hole. It's the last time this key-buster will start a race from New London which passes Montauk.

Larchmont Race Week, the Golden Jubilee of the famous Long Island Sound organization, was as successful as ever, with good weather and a fine turnout of boats. The fleet wasn't quite so large as last year, but pretty near it, which is saying a lot considering it is a Cup Race year. Defections among the larger craft were responsible for the slight drop in entries. Next year should see the 1929 record go by the board.

\+ + +

Right in line with other recent long distance races, this year's Bayside-Block Island Auxiliary Race broke all records for entries, starters and finishers, while the "class" of the competitors was greatly improved. This gas-and-wind classic, the daddy of all events of this character, brings out a lot of craft which never race at any other time, with a sprinkling of boats which occasionally take a fling at a race for sailing craft alone. It's the first one I've been in, and it was a lot of fun, with problems of tide, and when to run or not to run your motor, which make it an entirely different affair from an ordinary race. One funny thing is that until quite close to the finish you don't know where you stand. Being well up means little — you may have used up all your gas, and some bird well behind may come steaming along and finish at a seven-knot clip while you wallow around helplessly in a calm a mile or two from the finish. The element of uncertainty is always present — far more so than in an ordinary race. Which makes it all the more interesting.

\+ + +

It is too bad that there are not more boats shown on the chart of the Bermuda Race in this issue, but what can the Skipper do about it if the navigators won't send in their noon positions? He's not a mind reader. And while we're on the subject, don't take *all* these plotted positions as being absolutely accurate, for one or two boats were very obviously not where they are shown to be, according to boats within plain sight of them at the time. One thing which this chart shows is that the boats which stood to the westward of the straight line had all the best of it, while the "straight line" adherents, such as *Rugosa*, didn't fare so well. *Adriel*, looking for an easterly, took it on the nose. The westerly dope works five times out of six.

A hot brush between four Dee-Wite runabouts at Memphis, Tennessee

OF INTEREST TO THE SKIPPER

Winton Acquired by General Motors

ANNOUNCEMENT has been made that the company formerly known as The Winton Engine Company has been acquired by General Motors Corporation, and will be known henceforth as Winton Engine Corporation. The officers of the old company, as well as the operating and sales personnel, will remain with the new corporation. The further development and production of Winton marine and industrial engines, as well as their successful installation, will, therefore, be carried forward by the same men who have served the company with such signal success for many years. Advanced engineering and precision workmanship will continue to characterize Winton's place in the front rank as builders of fine power plants. Mr. George W. Codrington will continue as president.

Seagulls and Hall-Scotts

A snappy craft and one which has attracted much favorable comment this summer is *Tango*, a Robinson Seagull owned by J. W. Hubbard, of New York City. She is a natural finish mahogany craft with full cruising facilities incorporated in her spacious cabin, with a large forward cockpit and roomy bridge deck. The after cockpit will accommodate six or seven passengers. *Tango* is powered with a pair of Hall-Scott motors, which drive the handsome craft up to 38 miles an hour.

A Richfield Floating Filling Station

Contestants and onlookers at the Gold Cup races at Red Bank will remember the Richfield Floating Filling Station which will also be seen later in the season at Newport during the America's Cup Races in September. Besides being stocked with a large supply of gasoline, oil, kerosene and lubricants for the complete servicing of all types of water craft and seaplanes, this marine station, containing a waiting room and comfort station, is staffed with courteous, capable and uniformed attendants who will attend to every want. This steel floating station may be easily identified from the air by the checkered roof of the deckhouse.

Red Wings for Grey

Many Red Wing Motors have operated with great economy, power and reliability among the fishing fleet of far away New Zealand, and now comes the installation of a pair of Red Wing BB-Six 85–110 h.p. motors in a fine fishing craft for Zane Grey,

"Tango," a Robinson Seagull owned by J. W. Hubbard. A pair of Hall-Scotts give her a speed of 38 miles

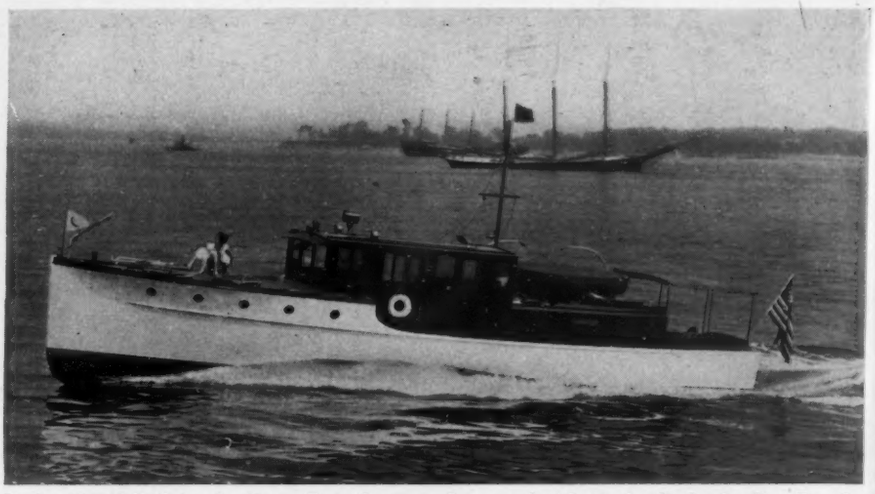
the well-known author and sportsman, who is having a 46-footer built, to be named *Frangipani*, after the Tahitian flower. The new craft has good beam and is designed especially for deep water fishing, Mr. Grey being especially fond of angling for sharks and swordfish in waters where absolute reliability is essential, and where power and economy is appreciated as well. The unfailing service rendered by Red Wings in the fishing fleet is what swung Grey to this make of motor.

Manhasset Bay Anti-Fouling Compound

For several years the Axel W. Nilsson Company, of 22 East 17th Street, New York City, with a branch at Port Washington, N. Y., have been manufacturing Manhasset Bay Yacht Racing Compound and the fact that many prominent Long Island Sound racing skippers are using this paint is proof of its efficiency.

Mr. Clifford D. Mallory recently informed the manufacturers that their paint had given him complete satisfaction and very surprising results and stated that he had used it on *Tycoon* and on the bottom of a 26-foot launch, and that he had ordered several gallons of the paint to be sent to the F. W. Ruddock Boat & Yacht Works, where Mr. Mallory is having another yacht built.

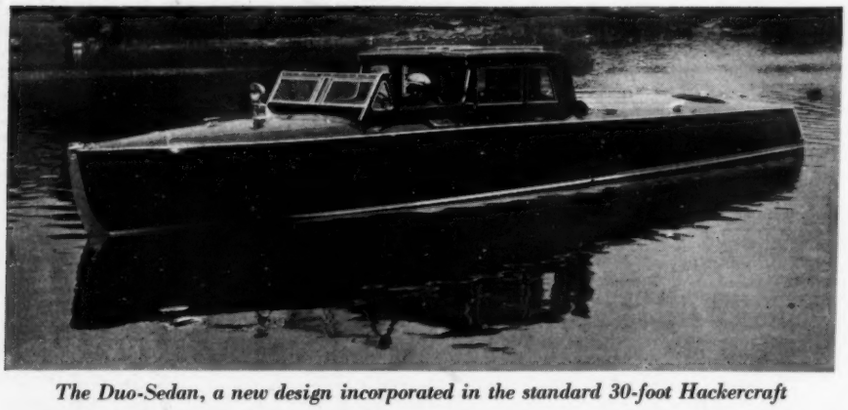
This firm also manufactures Sailslides and Tracks for Marconi-rigged vessels. These are used by many prominent yachtsmen, including Paul T. Buckler, owner of the *Blue Goose*, who wrote Mr. Nilsson that results of an installation made by them were very gratifying and that in a recent heavy weather trip nothing carried away. Mr. Buckler is thoroughly convinced that they help to make the sails fit a great deal better and reduce wear and tear on canvas to a minimum.



Designed and built by the Dawn Boat Corp., and powered with two 6-cylinder Sterling Petrels, "Sandra" makes 20 m.p.h. She is owned by Tracy Higgins, of Brooklyn

A New Hackercraft

A new design has been conceived recently by John Hacker, and incorporated in the standard 30-foot Hackercraft. This new model is what the Hacker Boat Company call the Duo-Sedan, as it is a compromise between a sedan runabout and a town car, having the advantages of an open or enclosed driver's seat forward of the small permanent sedan top which is built from the back of the after seat in the forward cockpit. The boat shown in the accompanying photograph was executed for Mrs. John T. Fitzgerald, of Chicago, for use at Rainy Lake, Ranier, Minnesota. She is powered with a standard 225 h.p. valve-in-head Kermath engine, and clicks off 40 miles an hour with ease.



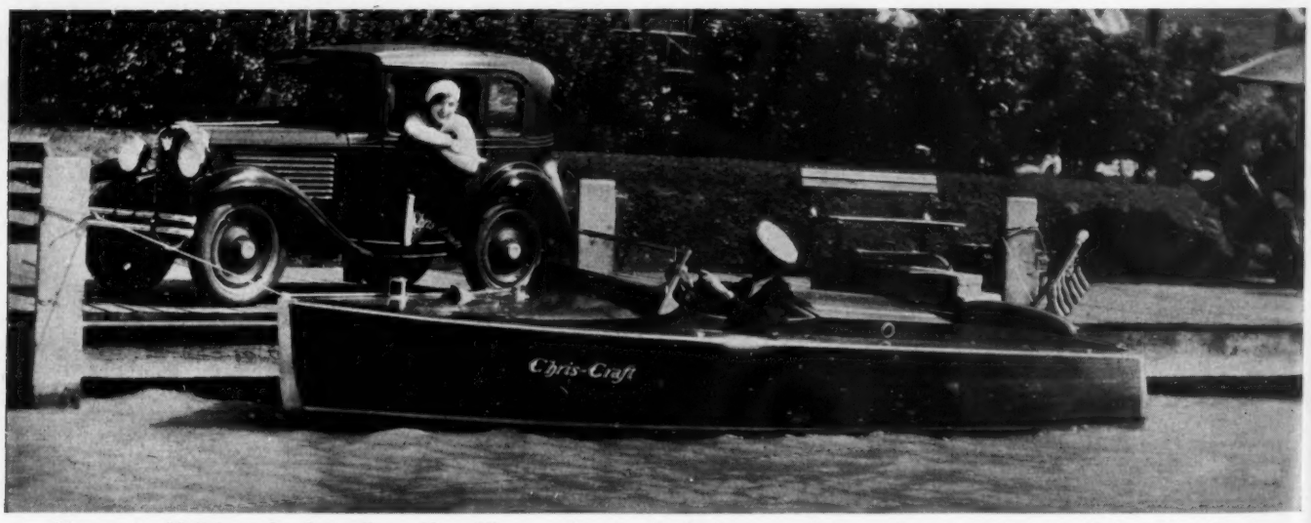
The Duo-Sedan, a new design incorporated in the standard 30-foot Hackercraft

Hill Diesels

The Hill Diesel Engine Company, of Lansing, Michigan, have just issued Circular No. 21, a compact, readable, concise yet complete leaflet of information of great interest to anyone wanting to know more about one of the foremost Diesel motors. Drop them a postcard, mentioning YACHTING, and get your copy.

Marine Equipment & Supply Co. Now Handles Maxim Silencers

The Marine Equipment & Supply Company, of 116 Walnut Street, Philadelphia, who are already distributors for Chris-Craft all-mahogany motor boats, and leading manufacturers of marine hardware, engines, and specialties, have been appointed distributors for Maxim silencers. A complete stock of the latest model M-2 Maxim silencer for motor boats is now on hand to serve marine dealers, boatbuilders and boat owners throughout their territory.



Two ways of helping solve the traffic problem. The new American-built Austin, and the smallest of the Chris-Craft line, a 17-footer

TWENTY GREAT GRAYS

A Motor for Every Boat—

No matter whether your boat is large or small--built for leisurely comfort or surprising speed--there is a Gray for the purpose.

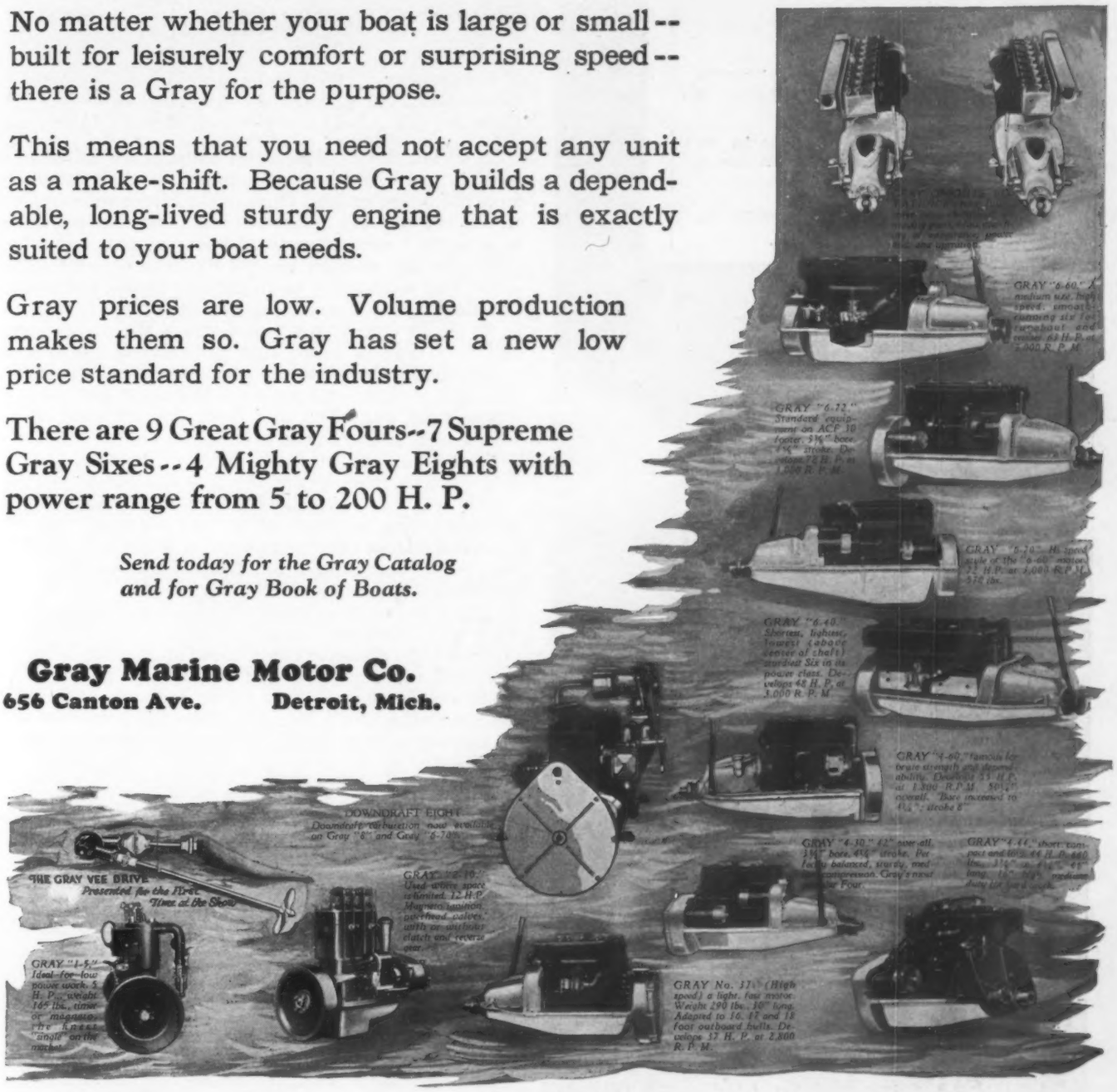
This means that you need not accept any unit as a make-shift. Because Gray builds a dependable, long-lived sturdy engine that is exactly suited to your boat needs.

Gray prices are low. Volume production makes them so. Gray has set a new low price standard for the industry.

There are 9 Great Gray Fours--7 Supreme Gray Sixes--4 Mighty Gray Eights with power range from 5 to 200 H. P.

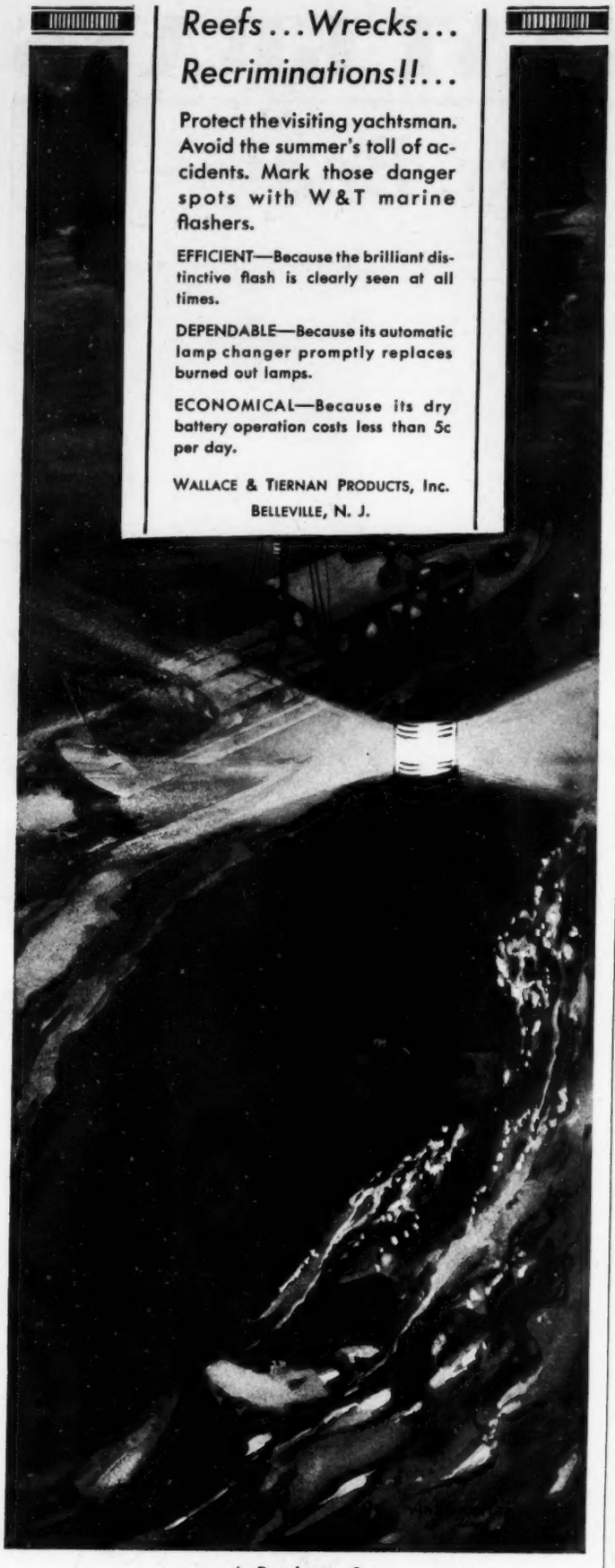
Send today for the Gray Catalog and for Gray Book of Boats.

Gray Marine Motor Co.
656 Canton Ave. Detroit, Mich.



GRAY MOTORS

BUILT BY PIONEERS—ENGINEERS—LEADERS


Reefs...Wrecks...
Recriminations!!...
Protect the visiting yachtsman. Avoid the summer's toll of accidents. Mark those danger spots with W&T marine flashers.
EFFICIENT—Because the brilliant distinctive flash is clearly seen at all times.
DEPENDABLE—Because its automatic lamp changer promptly replaces burned out lamps.
ECONOMICAL—Because its dry battery operation costs less than 5c per day.
WALLACE & TIERNAN PRODUCTS, Inc.
BELLEVILLE, N. J.

A Product of

WALLACE & TIERNAN

The Challenger—"Shamrock V"

(*Continued from page 52*)

challenger, and are in the best of racing form. The two last named were built in 1928 and 1929 under the International Rule, *Cambria* being by Fife, and *Candida* by Nicholson.

In twenty-two races, *Shamrock* took fifteen firsts and four seconds, as the following table shows:

	Starts	Firsts	Seconds	Thirds	Total
Shamrock	22	15	4	—	19
Lulworth	25	7	1	2	10
Cambria	25	1	10	3	14
White Heather	25	1	5	—	6
Britannia	6	1	1	—	2
Candida	11	—	3	1	4

In all but five of these races *Shamrock V* sailed from scratch, neither asking nor receiving time allowance from the larger yachts. Thus, in the fifteen wins credited to her, she actually finished in first place thirteen times, beating her larger competitors boat for boat. In her first two races she finished second, but won on time allowance. This is certainly an impressive record and stamps the challenger as an outstanding performer.

As to the conditions under which these races were sailed, it may be noted that in twelve of the races in which she finished first the winds were what the British call light, or light and variable. Her other first place on actual time was sailed in a fresh, squally wind over a course of 47 miles. In one of the races awarded to *Shamrock* on time, the wind was light at the start, but increased to a fresh breeze towards the finish; yet *Lulworth* beat her by only 14 seconds actually, over a 34-mile course. Not enough to save her time.

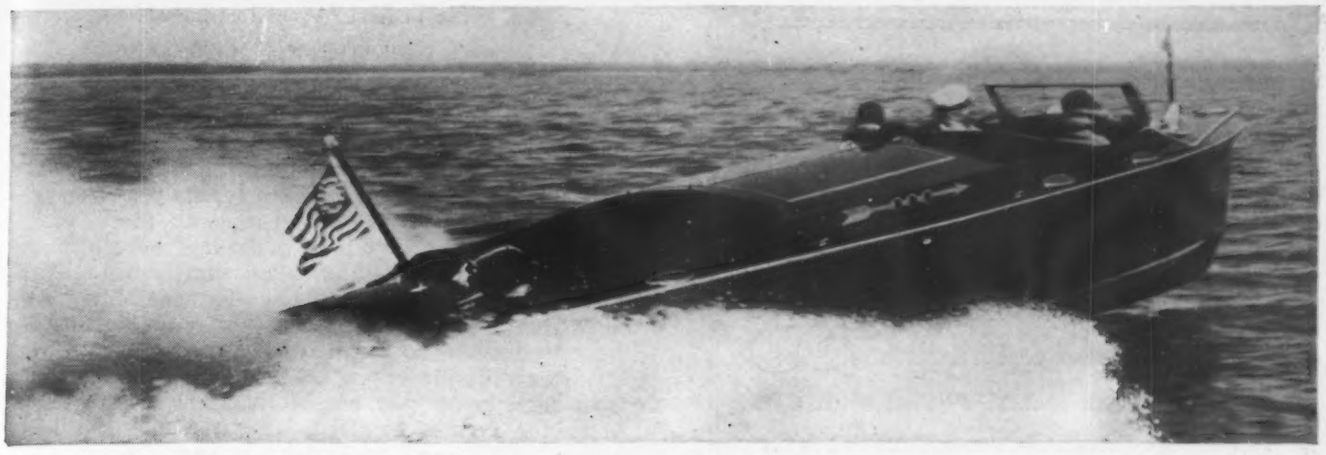
It looks from the foregoing as if *Shamrock V* were a very smart boat in light to moderate winds and yet that she can give a good account of herself when it breezes on. If this is so, we may well have our work cut out for us over the Newport courses from September 13th on, provided the challenger gets back into her top form and is as well sailed as the defender. What the new boat will do in a drift we do not yet know. And yet, with a 5½-hour time limit for a 30-mile course, the breeze must be of fair strength to bring the contestants home within the limit.

The Defence of the America's Cup

(*Continued from page 48*)

will not be an easy one, as the racing up to mid-season has been particularly close between three of these yachts. *Weetamoe* and *Enterprise* are at their best in light to moderate weather, and *Yankee* can usually beat them both in a breeze above 16 knots' strength. Up to this writing *Whirlwind* has not found herself, and her chances of selection are very slim, even if she improves in the final elimination races, which began on August 20th, and as a result of which the America's Cup Committee will make its final selection, which must, under the terms of the match, be announced at least one week before the first race on September 13th.

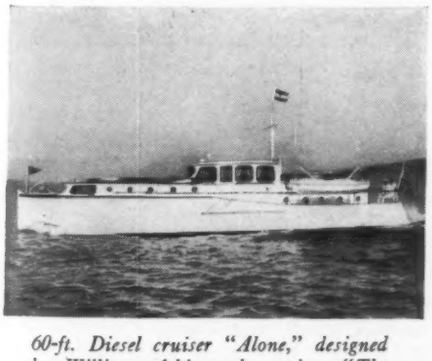
The America's Cup Committee of the New York Yacht Club is composed of W. Butler Duncan, W. A. W. Stewart, George A. Cormack, J. M. Macdonough and E. Townsend Irvin. All are men of wide experience in yachting affairs and three of them have played important parts in previous races for the America's Cup. There is thus every assurance that on whatever boat the choice falls, the country will be worthily represented.



22½-ft. (red) Dart, making 37 m.p.h. "Proved their superiority," writes Dart Boats, Inc., announcing their decision to equip all models with Goodrich bearings, used last year on this and larger models.

SMOOTHER OPERATION A FEATURE OF THESE 1930 BOATS

18½-ft. runabout, smallest Dart, now equipped with Goodrich bearings, makes 32 m.p.h. "In actual tests by our Engineering Department," writes Webb C. Hayes II, Dart President, "all known varieties of strut bearings were considered."



60-ft. Diesel cruiser "Alone," designed by William Atkin, who writes, "The Cutless Rubber Bearing has given such excellent service that in the future I shall always specify bearings of this type."

Vibration reduced by Goodrich soft rubber bearings... LUBRICATED WITH WATER...

Prominent builders adopt these bearings for* Smallest *as well as* Largest *models!

HERE is news of interest to every boat buyer. Owners of 1930 boats, built by the manufacturers listed below, will be free from the trouble and expense of mid-season bearing renewal.

Even more important to many owners, these new boats will be remarkably *free from vibration*—the vibration which begins soon after a bearing is installed and becomes constantly more noticeable, more and more annoying—until, at last, the bearing is replaced again.

The list below covers standardized-boat builders who use Goodrich bearings as standard equipment. Many use them exclusively. Dart and Dodge are the latest to adopt them for *every* model, *smallest* as well as *largest*.

The B. F. Goodrich Rubber Co. (Est. 1870), Akron, Ohio

These standardized boat-builders use Goodrich bearings as standard equipment.

The Aeolian Company, Neponset, Mass.
The American Car & Foundry Co., New York
Banfield Sea Skiff Works, New York
Corsair Boat Co., Detroit, Mich.
Dachel-Carter Boat Co., Inc., Benton Harbor, Mich.
Dart Boats, Inc., Toledo, O.
Dawn Boat Corp., New York City.
Horace E. Dodge Boat Works, Detroit, Mich.
Dunphy Boat Mfg. Co., Eau Claire, Wis.
Dyer Motorcraft Corp., East Greenwich, R.I.
The Elco Works, Bayonne, N. J.
Fleetwing Yacht & Shipbuilding Corp., New York.
Gray Boats, Thomaston, Me.
Hacker Boat Co., Mt. Clemens, Mich.
Huckins Yacht Corp., Jacksonville, Fla.
Frederic P. Humphreys, Inc., New York City.
Hubert S. Johnson, Bayhead, N. J.
Luders Marine Construction Co., Stamford, Conn.
Geo. Lawley & Sons Corp., Boston, Mass.
A. G. Liggett & Son Co., Wyandotte, Mich.
Long Island Shipyard, Inc., Port Jefferson, L. I., N. Y.
Marine Construction Co., Wilmington, Del.
New York Yacht, Launch & Engine Co., New York.
Robinson Marine Construction Co., Benton Harbor, Mich.
Sea Sled Corp., New York City.
Toppan Boat & Engine Co., Medford, Mass.
Vineyard Shipbldg. Co., Milford, Del.
Wheeler Shipyard, Brooklyn, N. Y.
Whitney Woodcraft Corp., East Hartford, Conn.

Goodrich *Cutless* Bearings

Another B. F. Goodrich Product

ESTABLISHED 1818

Brooks Brothers,
CLOTHING,
Gentlemen's Furnishing Goods,
MADISON AVENUE COR. FORTY-FOURTH STREET
NEW YORK

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Clothes for the Yachtsman

We have published a New Edition of the booklet, List of Yachts & Racing Schedule, Long Island Sound (Western Part) with Notes on the International Yacht Races

A copy will be sent to anyone mentioning
YACHTING

Send for "A Wardrobe for
LAWN TENNIS & YACHTING"

BRANCH STORES
BOSTON
NEWBURY CORNER OF BERKELEY STREET
NEWPORT PALM BEACH

The Federal Motor Boat Laws

(*Continued from page 90*)

tional points which cannot be ignored if the motor boat owner is to enjoy the experience of having the equipment of his craft approved by enforcement officers.

The first is that the equipment must be so placed as to be instantly available. Obviously, life preservers that are locked up in some out-of-the-way place, or, fire extinguishers that are buried under half a ton of hawser can hardly be regarded as complying strictly with the law. The second point is that equipment always must be in good condition. Whistles that refuse to function, fire extinguishers so corroded that they refuse to work, and rotten life preservers are typical examples of equipment that, in no case, can be regarded as satisfactory. Useless equipment is often of greater potential danger than a total lack of equipment, since it arouses a false sense of security.

It is pointed out that no equipment need be kept on a vessel while it is moored, tied to a dock, or otherwise not in actual navigation. When a motor boat is moored or anchored, it is required to carry only such means of identification as have been assigned to it under the ownership laws, and an anchor light, between the hours of sunset and sunrise.

The anchor light for any vessel that is under one hundred and fifty (150) feet in length is always carried forward, where it can best be seen, but at a height not exceeding twenty (20) feet above the hull. It must be a white light and in a lantern so constructed as to throw a clear, uniform and unbroken light, visible all around the horizon at a distance of at least one (1) mile.

The following table shows, in a general way, how the law affects motor boats in each of the three classes. While it is too general to be of much value, if consulted by itself and without reference to the specific items discussed above, it does serve as a review of the major requirements.

COMPARATIVE TABLE OF EQUIPMENT REQUIREMENTS

	Class One	*Class Two*	*Class Three*
Lights	Combination red-and-green light forward White light aft	White light forward Red light to port Green light to starboard White light aft All with fresnel or fluted lenses and properly screened	White light forward Red light to port Green light to starboard White light aft All with fresnel or fluted lenses and properly screened
Sound-producing devices	Whistle	Whistle Foghorn Bell	Whistle Foghorn Bell (Not less than eight inches across the mouth)
Means for extinguishing burning gasoline	Approved type of fire extinguisher	Approved type of fire extinguisher	Approved type of fire extinguisher
Life-saving devices	Approved types sufficient in number to support all on board the craft*	Approved types sufficient in number to support all on board the craft*	Approved types sufficient in number to support all on board the craft*

* On motor boats engaged in carrying passengers for hire, life preservers of the prescribed type must be provided for each passenger on board.

(*To be continued*)

THE WHOLE COASTLINE IS YOUR HIGHWAY
When you own A CONSOLIDATED CRUISER

PLAN now for the wonderful summer enjoyment that can be yours next year as the owner of a Consolidated boat. It will pay you rich dividends in health and happiness for yourself and your family...and in the delightful friendships and associations that being a yachtsman will bring you.

• • •

Consolidated-built, Speedway-powered boats combine beauty of line and luxurious comfort of appointment with power, speed and seaworthiness. They are the result of nearly half a century of experience in fine shipbuilding. Thousands of Consolidated Craft and Consolidated-built Speedway engines are giving constant, dependable service, in yachting, in Government use, and in business.

• • •

Let us send you interesting data and illustrated literature about any size or type of boat that appeals to you. Then consult with our engineers. They will be glad to provide specifications and estimates with not the slightest cost or obligation to you. Write to us... today.

PLACE your order now to insure delivery next Spring. Write us for details concerning any type of boat you may have in mind...either in steel or wood, gasoline or Diesel drive.

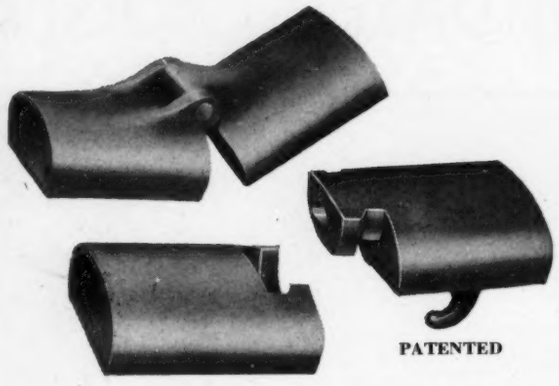
• • •

THE "DONMARGEO", an 81-foot commuter, designed and built by CONSOLIDATED for Mr. George F. Breen.

CONSOLIDATED SHIPBUILDING CORPORATION
MORRIS HEIGHTS NEW YORK

MARINE HARDWARE *SPECIALTIES*

Rail Hinge Socket Set
Cast of BRONZE Polished

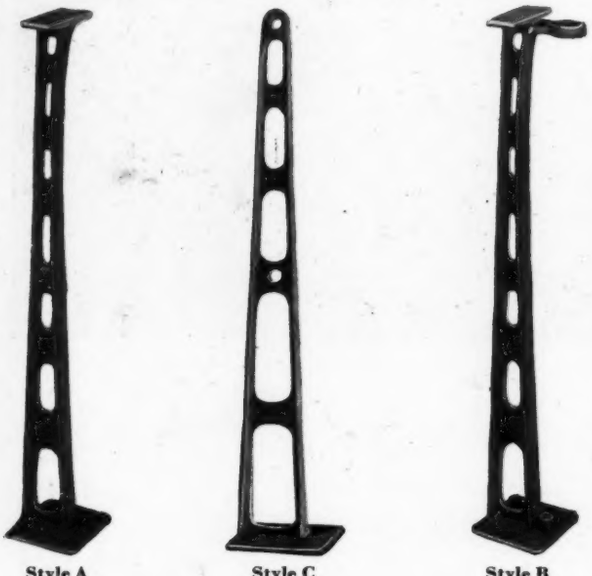


PATENTED

Accidental opening of rail is prevented by this new, positive, automatic locking latch with Dovetail Joint.

Made in three sizes:
No. 1 fits 2½" x 1⅛" Rail
No. 2 fits 3" x 1⅛" Rail
No. 3 fits 3½" x 1⅜" Rail
Larger sizes to order

Rail Stanchions Cast of BRONZE



Style A | Style C Patented | Style B

Styles A and B have top pads for wooden rails. Style B has supports for awning stanchions. Style C has eye at top for wire rope.

Bases and top pads are drilled and countersunk for wood screws. Centre webs are drilled for wire rope.

These stanchions are a Rigid I-Beam Section. They have unlimited strength and are neat in appearance.

Made in four sizes for:
18", 24", 27" and 30" Rail Heights
Larger sizes to order

Manufactured and Sold by
BUCKHOUT BOAT CORPORATION
1 Union Street
POUGHKEEPSIE, NEW YORK

Electricity for Yacht Propulsion

(*Continued from page 69*)

b.hp. at 700 to 750 r.p.m. plus 25 hp. in auxiliary units. She might be any length from 60 feet to 75 feet, according to the speed.

If Diesel-electric propulsion be used, the propeller speed, draft permitting, can be brought down to 400 r.p.m. and the engine speed increased to 2,000 r.p.m., using, say, four of the new Hill 40 b.hp. light-weight, electric-starting Diesels, 3½-inch bore by 6-inch stroke in four cylinders, or three of them in six cylinders, which engines both turn at this rate. Each engine, complete with electric starter, weighs only about 600 lbs. Together with generator, the over all length is under 6 feet, so the set makes a compact and neat installation. The only auxiliary required will be a hand-starting 5 hp. gasoline, or Diesel generator emergency unit for charging the batteries if run down. No air tank or compressor is needed. Hence, the total engine power for the same yacht speed need be but 160 b.hp., compared with 200 hp. total for the direct drive. The latter would have to be direct-reversible, or else a mechanical reverse gear adopted. Other makes of the same general size and weight would give the same comparative results.

The four generators would be 26 kw, 125 volts, 2,000 r.p.m., shunt-wound units, separately excited by a small exciter. These would furnish current for one 125 s.hp., 500-volt propelling motor turning at 400 r.p.m., and excited separately by the same exciter, all installed in the engine-room, or the motor in the stern, if preferred. Just how compact it is can best be visualized when I mention that this little Diesel engine is only three feet long — smaller than a gasoline engine of the same power and revolutions. In fact, it is quite an engineering achievement. On tests, over 40 b.hp. was developed at 2,000 r.p.m., and as high as 2,300 r.p.m. attained. I saw one of these Diesels being fitted in a Reo automobile, and there was ample room for two more cylinders under the hood. The six-cylinder 60 h.p. model will be just over four feet in length, exclusive of generator. Three of them, with part of the center unit staggered several feet astern of the wing units, and with the propelling motors on either side of the central Diesel, would make an ideal yacht layout. In operation, the installation should be more silent and more free from vibration than any other cruiser ever built. Overhauling, or repairs of the very small working parts of these tiny Diesels should be a delight — comparatively speaking — to the engineer in charge. In fact, he could almost carry a spare engine in his tool box.

I consider that Diesel-electric drive is even practical with a 50-footer where two 40 b.hp., or 60 b.hp., sets could be used nicely.

At present this compact little 40 hp. Hill Diesel is marketed with a 20 kw. generator for engine-room auxiliary purposes, and its complete over all length, thus equipped, is but 62 inches. It seems to me that it could well be adapted for the purpose I have mentioned, particularly for a substantially built, full-lined cruiser, where propeller power rather than speed is the more important factor.

Just what would the owner of a small yacht get? He would have a vibrationless, smooth running craft completely electrified. He would have finger-tip control of the machinery from the wheelhouse. His heating, cooking, lighting, siren, steering, pumps, davits, windlass — all would be electrically operated. When underway, and auxiliary power is needed, a little current can be taken from each generator set. When in port, any one of the four, or three, as the case may be, main Diesel-generator sets can be run, or the storage battery used, according to the load needed. His yacht is a miniature electric

"Gamey" motors that put every ounce of weight to work . . .

No good sportsman willingly carries an ounce of surplus weight in his equipment. This is likewise true of marine motors. It is particularly true where they have been scientifically lightened with Alcoa Aluminum Alloys which weigh only ⅓ as much as iron or steel.

Part by part old heavy metals have been replaced with these modern, light, strong Alcoa Aluminum Alloys. The effect is giant strength with midget weight.

See that the boat you buy provides you with maximum engine performance by being equipped with Lynite Pistons. Make sure that every possible part where extreme strength and maximum resistance to salt water corrosion are important, is made from the heat treated Alcoa Aluminum Alloy No. 195 which is especially developed for this purpose.

Then you are certain to get minimum weight, maximum life, and resistance to corrosion. ALUMINUM COMPANY *of* AMERICA; 2499 Oliver Bldg., PITTSBURGH, PENNSYLVANIA.

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NEW ENGLAND STEAMSHIP LINES

power-plant furnishing current to every part of the boat. Risk of complete breakdown at sea is extremely improbable, as the yacht can make fair speed with two or three main engines running, and steering way with but one in operation. The complete electrical machinery would cost about $11,500, and the Diesels about the same sum. That's quite a lot of money for the machinery of a 75-foot yacht. But it's worth while!

Selecting a Defender for the America's Cup

(*Continued from page 55*)

as an undercanvassed boat will, seeming to justify the predictions of those who said last winter that she was too heavy a boat for the amount of sail she could carry without going over the class limit. Her main fault was in her steering. She would wear down two men on her wheel in half an hour in a breeze, and once she threw a helmsman clear over the wheel. Her mast has been moved forward, in all, nearly five feet from its original position, but the fault does not seem to be entirely corrected yet.

In short, barring something of a miracle, the choice had narrowed down from four to three by the early part of August. Which leaves the committee still with plenty to worry about. Assuming that with all their tuning up in the few weeks prior to the final elimination series the boats continue to show about the same relative qualities. Consider what the committee still has to decide. Between *Weetamoe* and *Enterprise*, which is better? *Enterprise* is exceptionally fast to windward, fair on a reach, and slow on a run in moderate weather, but she can drift like a ghost when there is no air at all. *Weetamoe*, on the other hand, though not quite as fast on the wind under some conditions, is faster on a reach and much faster on a run, and every time they have been matched, so far, she has beaten *Enterprise*.

When you have decided between those two, then you have to consider *Yankee*, which will beat either of them in a breeze of wind. *Yankee* is under this disadvantage, that *Shamrock V* is a smaller and lighter boat (in size she is between *Enterprise* and *Weetamoe*), and like them, she is presumably a light weather boat. Very well; then pick a light weather boat to meet her, since after all the average wind velocity over the last few decades off Block Island has been twelve knots during the period when the races will take place. But suppose, on the other hand, *Shamrock* turns out to be a phenomenally fast light weather boat — and there is reason to doubt whether *Weetamoe* or *Enterprise* could beat her even in their own conditions. Then, of course, the trick will be to pick *Yankee* and gamble on a breeze. But how in the world is the selection committee going to be able to guess in advance whether or not *Shamrock* could beat our light weather boat? And so on.

These are only a few of the considerations which perplex Mr. Duncan and the others of his committee. There are such things as the personal equation — the committee may suspect that one skipper or another might lose his head at a critical time, might be likely to foul the challenger in a tight situation. They may fear that one boat's bottom is more likely to foul up during the period of the races than another's — a consideration which badly damaged *Vanitie's* chances of selection in 1920. They may feel that something about the rig of one boat is not dependable in case she gets into a real blow. These things are entirely up to the discretion of the committee. What they say goes, regardless of the number of races won or lost by any individual boat.

Manufacturing Comfort at Sea

THE anticipation of a sea voyage is always tinged with the hope that the weather will permit its enjoyment to the fullest extent. The Gyro-Stabilizer removes this feeling of uncertainty, and assures a comfortable voyage by preventing the vessel from rolling in the roughest sea. ¶ The owner of a yacht shows his great regard for his guests by this final touch of assured comfort, without which, in rough weather little else matters. ¶ Thirty-four Gyro-Stabilizers for vessels of sixty-five to ten thousand tons have been constructed, installed and put into service. The earlier of these installations are on their thirteenth and fourteenth year of satisfactory operation. It is of greatest significance, that orders have been received for Gyro-Stabilizers for sister ships of those on which installations have been previously made. ¶ No vessel is too large to be successfully stabilized.

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So far, there is only one thing sure about it, and that is that the decision will be made in just as fair a manner as it can be made, and received in a thoroughly sporting spirit by winners and losers alike.

The Damnedest Cruise!

(*Continued from page 77*)

night to reach a pier on the Jersey side. This was very sad, because I had hoped to sail down around the Battery and up the East River during the night, while the traffic was slack.

With sunrise the nor'wester piped up again. However, it blew off the top of the Palisades, and away down where we were there was only an occasional whirlwind of a puff. It did not look very good for sailing. Jim and I went into a huddle and decided we would have to get the motor going somehow, after all. With that running, I figured it would be possible, if not safe, to tackle the Harlem River and so cut off the long run down around Manhattan's lower end. Precisely what he did I do not know, but after a couple of hours of persuasion Jim got the broken ends of the shaft to hold together.

Under power alone, we headed diagonally across the Hudson River and tooted for the draw at the entrance to Spuyten Dyvil Creek. It opened in good season and everything looked fine. The motor was buzzing merrily, we had a gale of wind on our tail, and I could see the tide sucking into the creek at a six- or eight-knot clip. And just at the critical moment, as we were aiming to shoot through, the motor died and a tug and barge appeared *coming out.* In that narrow entrance only one of us could go at a time.

It was one of those occasions when your heart seems to freeze. There was one chance only. We took it — and took it quickly. Before leaving the dock I had tied three reefs in the mainsail and lowered it and secured it with a single stop, just in case we had to set it in a hurry. Jim grabbed one halliard and I the other and we sent that sail up in less time than it takes to tell. The sheet was down hard, so she rounded up of her own accord and swept out into the river again before I could reach the helm. I never saw a little boat handle herself so sweetly or to such good effect; she certainly saved her own life. And then, because there seemed nothing else to do, I ran her off and shot through the open draw after the tug and barge had come out.

"My Gosh," cried Jim, "what's the big idea? Now we are in a fix!"

Well, that seemed to be so. We were roaring down this narrow creek dead before the wind with a whole flock of drawbridges ahead and no place to anchor or round up. In all candor, it would never occur to me to try to go through Spuyten Dyvil under sail!

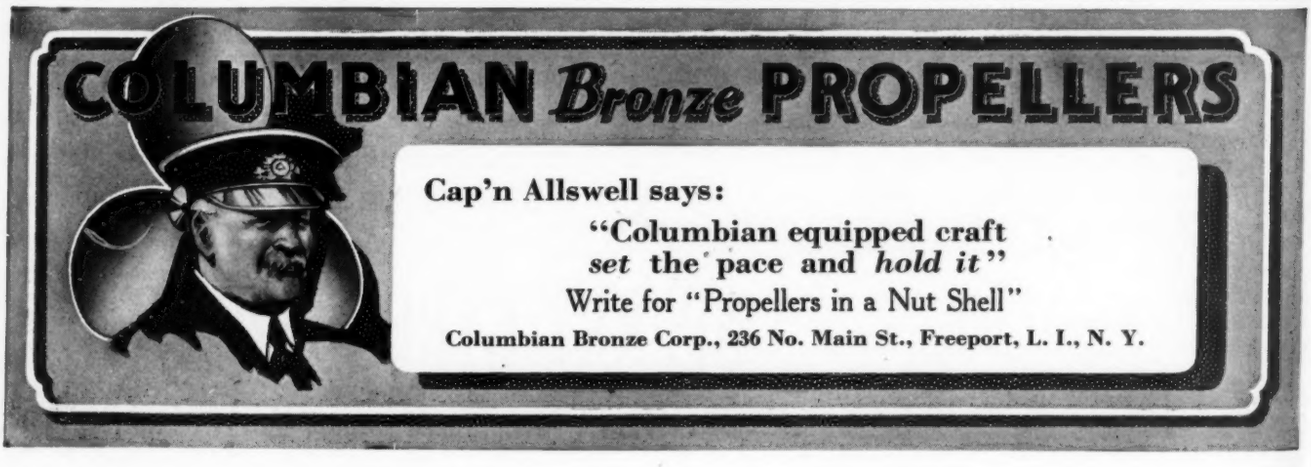
"Hell!" I said, "Start the motor again and we'll drop the mainsail. Quick!"

But Jim shook his head. "It's no use," he replied. "Something has gone completely dead."

That wasn't so very good, I must admit. We were passing a little cove where a lot of houseboats and small cruising craft used to lie. My recollection was that the place had three or four feet of water at low tide. Anyhow, it was the last chance, for after this there would be only docks. I rounded her up into this little niche — and she ran up on the mud flats like a sled.

"Well," said Jim, "that's that! Now if there was some way to get ashore we could go home."

We stayed there for 24 hours, by which time the mud had loosened up enough to let *Lorna* out on the peak of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Partial shoreline view of the great Neponset yards of George Lawley & Son Corporation. Illustration below shows Cup Defender "Yankee" sailing under jib topsail rig.

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(including stateroom berth and meals)

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The luxurious ocean liners "Evangeline" and "North Land" leave New York and Boston respectively. The ships will follow the yachts over the course, and then remain in Newport Harbor overnight. Tender service will be provided for those who wish to visit friends ashore or attend the festivities. There will be music and dancing aboard ship to make this cruise a real holiday outing. On the return trip, there is a pleasant daylight sail through Long Island Sound on the "Evangeline," reaching New York 5:00 P.M. Sundays, and through Buzzard's Bay and the Cape Cod Canal on the "North Land," reaching Boston 3:00 P.M. Sundays.

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EASTERN

steamship lines

high water. The remaining distance to Little Hell Gate we covered in tow of Junk Boat 158. This was an ex-Navy motor sailer with a one-lung motor and a genial Italian for crew. He had reason to be genial; he held me up for twenty dollars to drag us through. But it was worth it to get out of that creek. As it was, our truck fouled one of the bridges, after the bridge tender had ordered us to come through.

"I've been on this bridge for thirty-three years," he sang out; "don't you suppose I know whether a boat can go under or not?"

And just then — CRACK!

Fortunately, Tony had his doubts and was proceeding dead slow, so no harm was done. "You better sataya da tirty-tree more!" he chortled in delight. A very engaging person, pirate though he was.

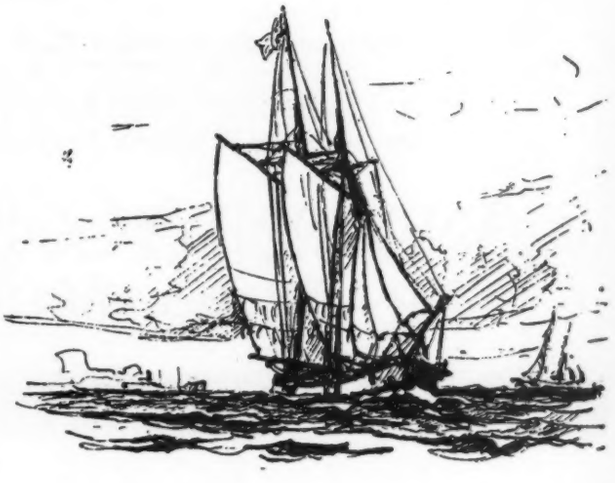
In Little Hell Gate we made sail to help buck the roaring tide. With her big mainsail set, *Lorna* soon ran ahead of her tug and Tony had to let go his line. But he kept with us till off Riker's Island, which was a very decent thing for him to do.

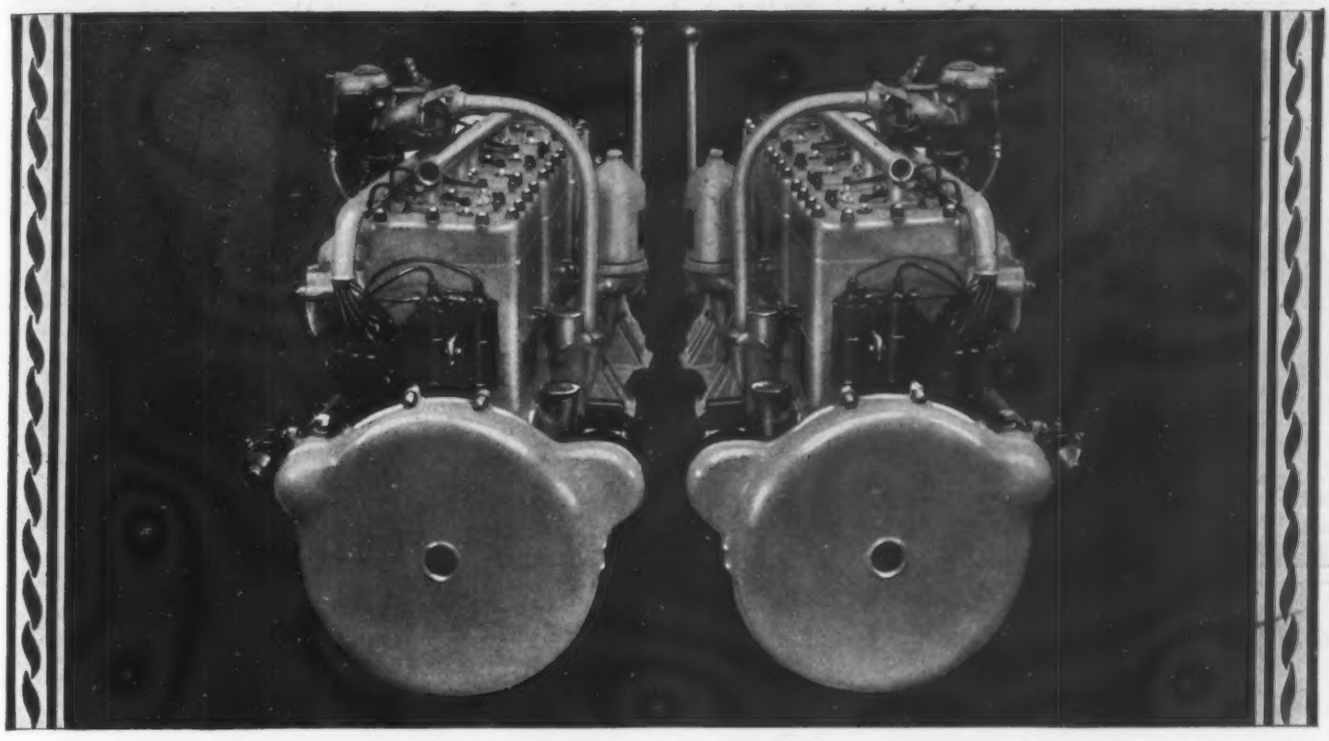
The Jinx of Narrow Waters must have seen *Lorna* eluding his grasp. Poor little boat, there wasn't much sign of cotton wool sticking to her now! But she had nearly won through and the old Jinx was beginning to lash his tail. He made one last desperate effort to finish us by causing a Clauson Point ferry boat to do its best to run us down. We had, of course, the right of way, and it never occurred to us that it would not be granted. But when I finally jammed the helm down the bow overhang of the ferry boat was already above *Lorna's* rail. We saved our lives by inches, you might say.

When we passed Execution Light and found ourselves actually on Long Island Sound we wanted to shout for joy. Instead we got busy with scrubbing brush and mop, removing marks of battle from our ship's deck and sides. How sweetly she sailed! It was as if she, too, knew that her troubles were past. She reeled off the long miles at an astonishing rate. The sun sank, the breeze lightened, and still she sped on. At last, with the dying breath of the good west wind, she slipped in past Green's Ledge Light and up into the little cove that we called home.

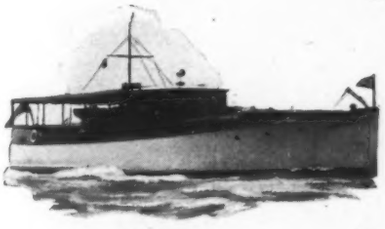
There came a hurried beat of small, eager oars and my young daughter scrambled on board.

"Oh, daddy," she cried, "are you really here? Where *have* you been all the while?"





SCRIPPS TWINS
enter field of larger craft



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STEPHENS
STAPLES-JOHNSON*
SUNBEAM "46"
WHEELER "PLAYMATES"*
Foreign
BRITISH POWER BOATS
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CLAUS CRAFT--*Germany*
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DESPUJOLS--*France*
ORTHOLAN--*Argentina*
BURLAND--*Bermuda*
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The capability of SCRIPPS Twins to successfully power those cruisers of larger size, where heretofore cumbersome, slow speed motors have been thought an absolute necessity, is emphatically demonstrated by a number of recent installations.

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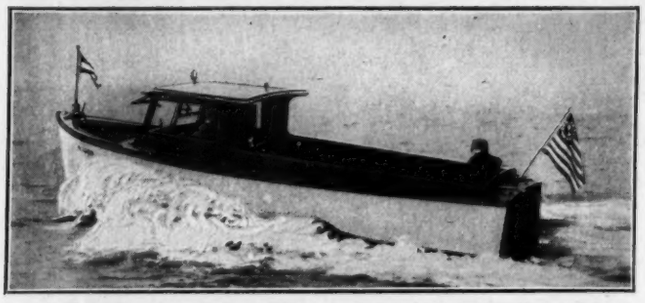

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The History of the America's Cup

(*Continued from page 60*)

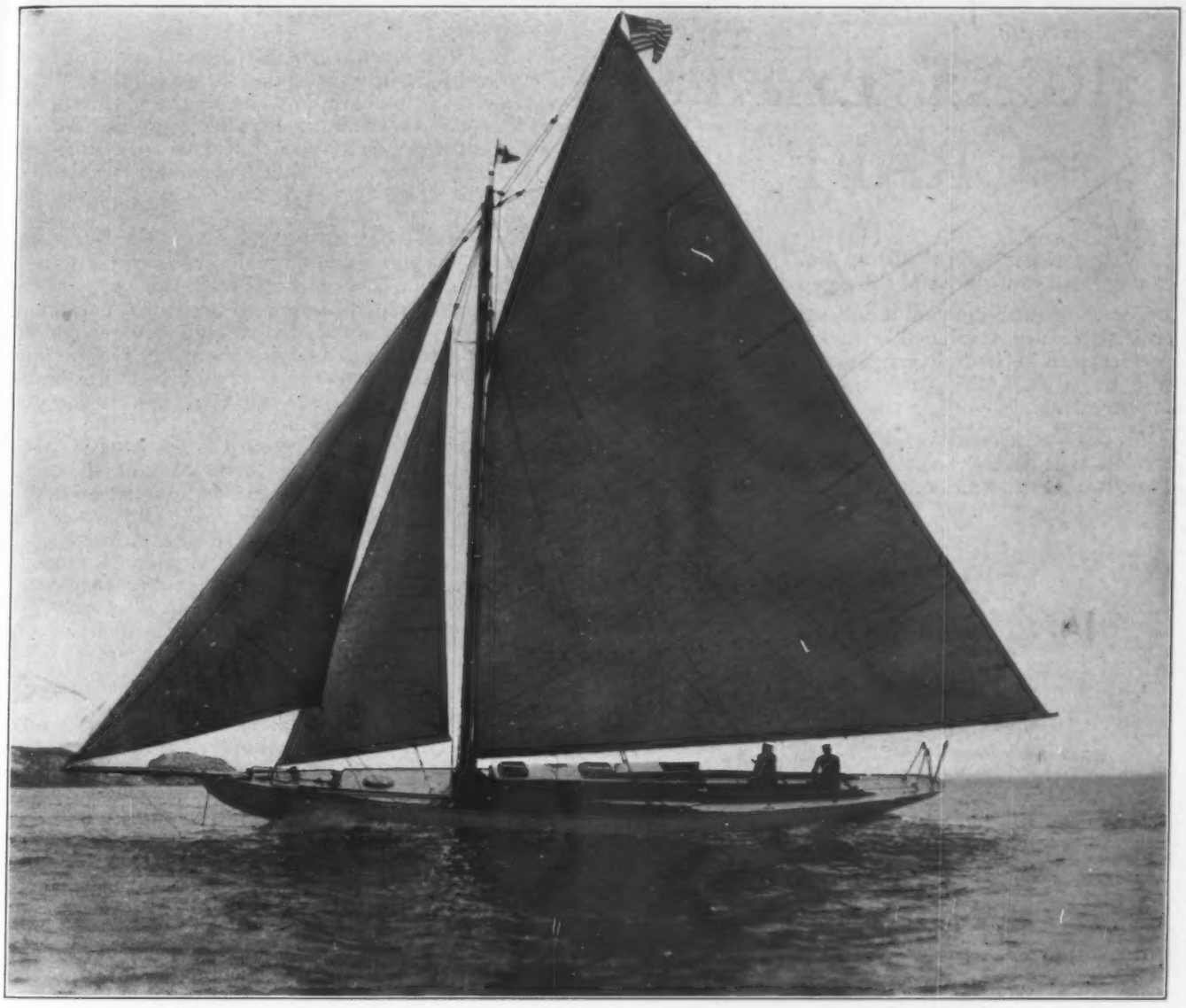
contest, and won by a narrow margin. In the race for the *America's* Cup, the N. Y. Y. C. insisted that the British visitor should enter his yacht against the whole N. Y. Y. C. fleet for a race over the Club's regular course, instead of making a match race against their fastest schooner. Mr. Ashbury protested, but raced nevertheless. The conditions of this race were, therefore, just about the same as those which the *America* met in England when she won the Cup, except that in the race of 1851 each yacht had a chance to win the Cup, whereas in this race none of the American yachts had any interest in it except to see that it was not taken back to England.

The race was sailed on August 8th, and the New York Yacht Club had twenty-three schooners entered against the *Cambria*, both keel boats and centerboarders being in the fleet. The start was made from anchor in New York Upper Bay, the race being 38 miles in length, out through the Narrows to Sandy Hook Lightvessel and return. *Cambria* never had a chance, as local conditions were also against her. The race was won by the little schooner *Magic*, a centerboarder, which covered the course in 4 hours 7 minutes 54 seconds elapsed time, *Cambria* finishing no better than tenth position, 27 minutes 3 seconds behind *Magic*. When time allowance was figured, this was stretched out to 39 minutes 12 seconds.

While Mr. Ashbury had felt that it was unfair to make him sail against the whole fleet of New York Yacht Club schooners, he had not protested at the time. But on his return to England he took up the question of a race for the Cup the following year and entered into a lengthy correspondence with the holding club to decide whether he would be obliged to race against a whole fleet. He contended that the terms under which the Cup was held called for a match race, and this meant a race between two boats only. The New York Yacht Club submitted the matter to the only surviving member of the old *America's* syndicate, Mr. George L. Schuyler, who unequivocally stated, to the gratification of fair-minded yachtsmen, that the donors of the Cup deemed a match race to be a race between two boats only, and that they had no intention of subjecting a challenger to terms which they themselves had considered unfair when they won the Cup in England. While the club accepted this verdict, it still claimed the right to meet the challenger with any yacht it pleased in any of the races sailed, picking four yachts and naming its representative the morning of each race.

Mr. Ashbury had built a new schooner named the *Livonia*, with which, after considerable more letter writing, he challenged, and a race was arranged for October, 1871. The *Livonia* was a big vessel of 264 tons measurement. To meet this yacht the New York Yacht Club named four schooners, the *Palmer* and *Columbia*, centerboarders, and fast light-weather boats, and the *Dauntless* and *Sappho*, keel schooners and best in a breeze. The first race was sailed October 16th, and the Committee picked *Columbia* as its candidate for the day. The "skimming dish," as the crew of the *Livonia* styled the defender, was very fast in the light weather and beat the English yacht by 27 minutes 4 seconds.

The series consisted of the best four out of seven races. In the second race, two days later, *Columbia* was again chosen, the breeze being light. The wind freshened, however, after the start, and on the 20-mile run off the wind the English boat was two minutes ahead of her rival at the outer mark. As there were no instructions as to how to turn the mark, *Livonia* jibed around so as to leave it on the starboard hand, this being the racing rule in England when not otherwise specified. In the



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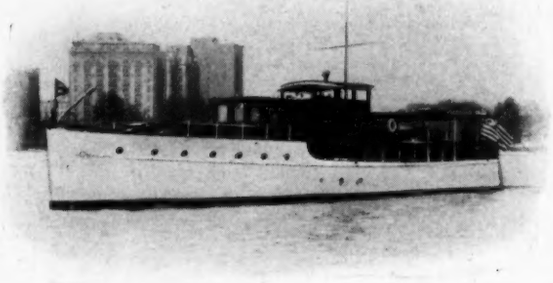
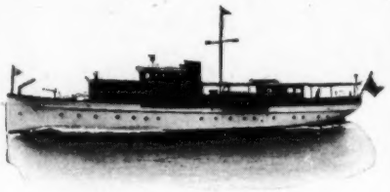


MARBO — 75-foot cruising yacht owned by Robert G. Hascall, Esq., of Cleveland, Ohio.

COMOCO — 98-foot Diesel yacht owned by R. W. Judson, Esq., of Detroit, Michigan.



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heavy breeze this was a difficult thing to do, and the *Livonia* was set down to leeward before she got her sheets flattened down. *Columbia*, which tacked around the mark, slipped into the lead. As the wind had shifted it was a close reach back, and though the wind was too fresh for *Columbia* she hung on to her lead, crossing the line 5 minutes 16 seconds ahead. Mr. Ashbury protested the race on the grounds that he had insufficient instructions as to turning the mark, but the protest was not allowed.

In the third race *Columbia* was again chosen. She sailed rather a discreditable race, however, being late at the line, and as the wind was fresh the weather was not at all to her liking. *Livonia* led to the first mark, but after passing this, *Columbia's* flying jib stay parted and she lost some six minutes getting the sail in. On the way home she broke her steering gear so that the mainsail had to be taken off and she was 19 minutes 3 seconds behind the *Livonia* at the finish.

In the fourth and fifth races the schooner *Sappho* was the American representative, the fourth being sailed in a hard reefing breeze which was just *Sappho's* weather, and she led the English yacht all the way. In the last race the wind was also fresh and *Sappho* repeated the trick, winning by 20 minutes 36 seconds elapsed time. This officially ended the series, the American boats having won four races out of seven. Mr. Ashbury protested vigorously and went home in a huff, feeling that he had not received fair treatment.

Canada Takes a Hand

The trouble over Mr. Ashbury's last race cooled any enthusiasm for challenging that other English sportsmen might have had, and the next two attempts to lift the cup came from Canada, in 1876 and 1881. The first was from the Royal Canadian Yacht Club, of Toronto, naming the centerboard schooner *Countess of Dufferin*.

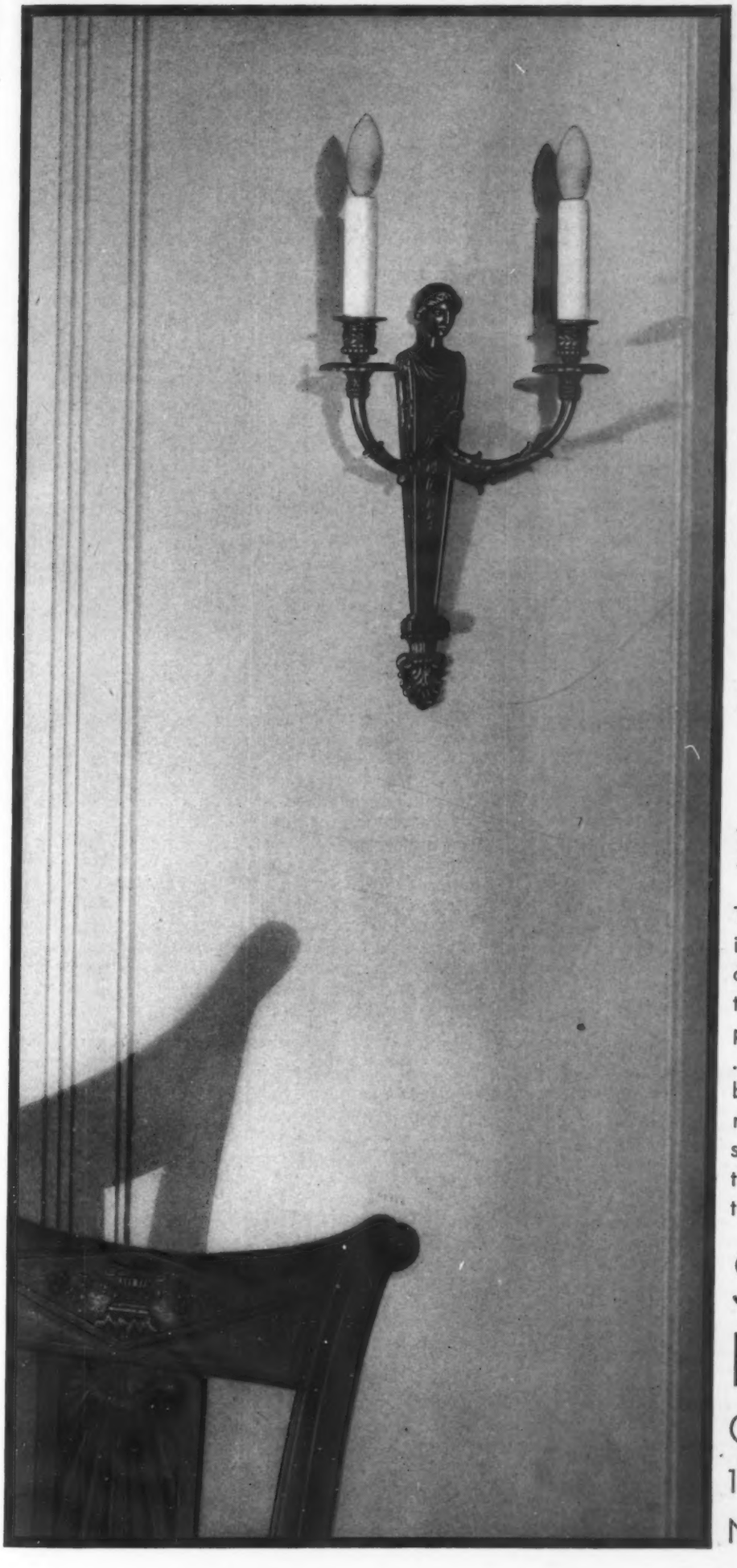
The New York Yacht Club selected the schooner *Madeleine* as the defender, both yachts being centerboarders and of the same general type. The American yacht won both races easily.

Five years after this series Canada challenged again for the Cup through the Bay of Quinte Yacht Club, the yacht named being the sloop *Atalanta*, designed and built by Alexander Cuthbert, the same man who had turned out the *Countess of Dufferin*. The challenger was not ready until the autumn and was towed to New York through the Erie Canal in October, 1881, a proceeding which caused much unfavorable comment. This was the first race sailed between sloops, and as the New York Yacht Club did not have many sloops in its fleet the flag officers of the club had a sloop built to defend the Cup, the first time this had been thought necessary. This yacht, the *Pocahontas*, was a failure at first, and the sloop *Mischief* was chosen to defend. *Mischief* was an iron yacht, designed by A. Cary Smith.

The races were sailed in November, long after the yachting season had closed. As a contest, the match was devoid of interest, the challenger being no match for the "iron pot," as the *Mischief* was familiarly called. This was the end of Canadian participation in America's Cup affairs, as the deed of gift was altered the following year so as to bar any yacht club from challenging that was not located on salt water, and to require a challenger to proceed to the port where the contest was to take place under sail on her own bottom. The new deed of gift also provided that the holding club should defend with one vessel only in all the races of a contest.

Enter Edward Burgess

It was four years later, in 1885, before another challenge was received. This came from England and named the cutter *Genesta*, owned by Sir Richard Sutton, as the



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challenger. This was the first cutter to race for the Cup and two yachts were built to defend: the *Priscilla*, ordered by the flag officers of the New York Yacht Club, and the *Puritan*, built for a Boston syndicate and designed by a young naval architect named Edward Burgess. The *Puritan* was chosen to defend.

In the first race on September 8th, in jockeying for position, the *Puritan* tried to cross the English yacht's bows when the latter had the right of way, but could not clear and *Genesta's* bowsprit went through *Puritan's* mainsail and was snapped off short at the stem. As the American boat was in the wrong she was promptly disqualified and the committee informed *Genesta's* owner that if he sailed over the course the race would be awarded to him. With sportsmanlike spirit, Sir Richard Sutton replied: "We are very much obliged, but we do not want it that way. We came over for a race, not a sailover."

Both boats were repaired and the first race was finally sailed on September 14th, over the regular New York Yacht Club course, the American boat winning by 16 minutes and 19 seconds corrected time. The next race was sailed September 16th, in a strong breeze, and *Genesta* led the American boat to the outer mark, before the wind. In a very strong breeze on the leg to windward, going home, the race was nip and tuck and the American boat just managed to cross the finish line 1 minute and 38 seconds to the good.

The following year England challenged again with the *Galatea*, owned by Lieutenant W. Henn, of the Royal Navy. *Galatea* was of much the same type as *Genesta*, and Gen. Paine had Burgess design another sloop, named the *Mayflower*. She was the biggest sloop in this country, being 100 feet long over all, and she was chosen to defend the Cup after a series of trial races. The *Galatea* did not do as well as the *Genesta*, being beaten in the first race by 12 minutes and 2 seconds; in the second race of the series by 29 minutes 9 seconds, the Cup thus staying on this side.

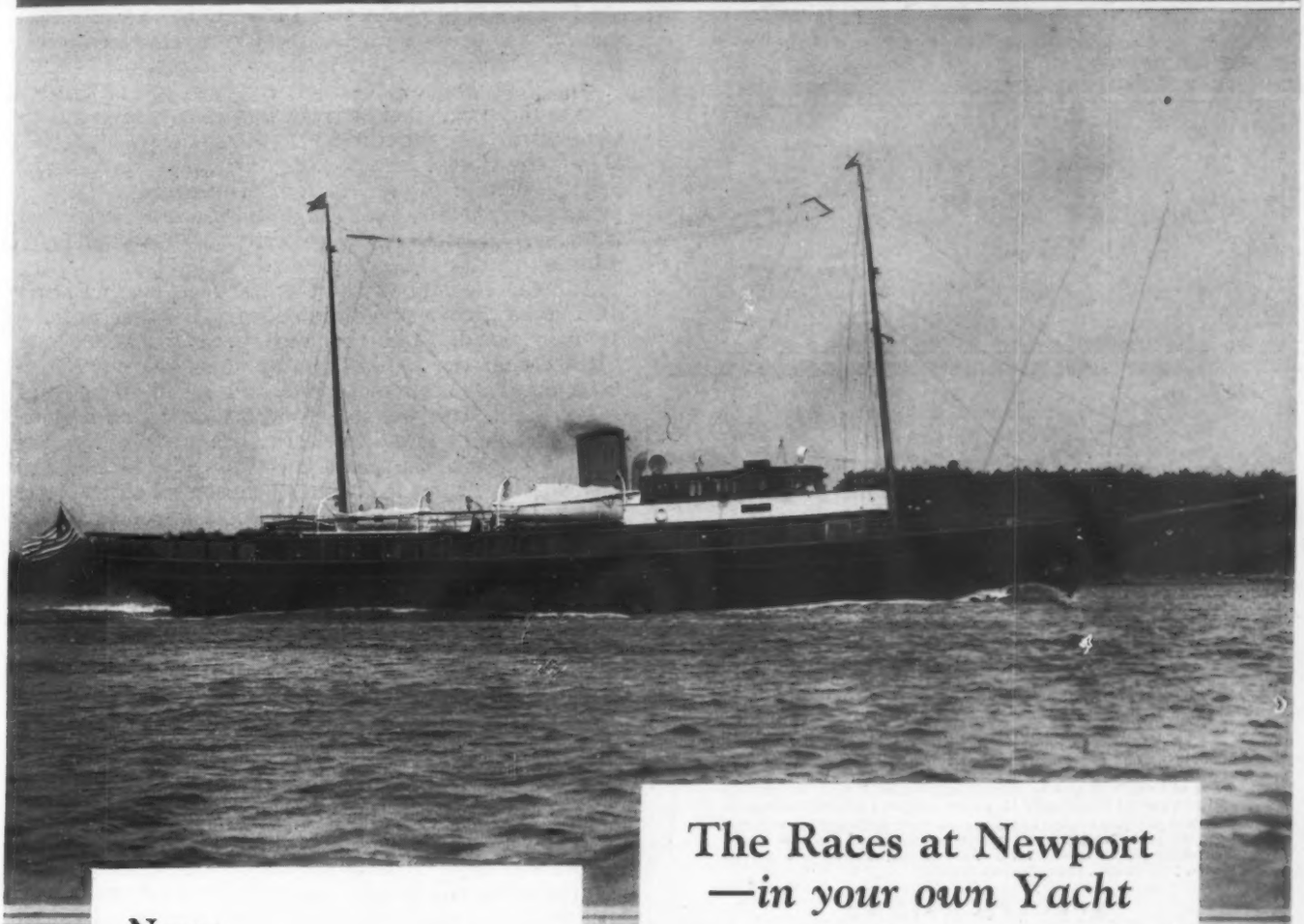
The following year, 1887, there was still another race for the Cup, Scotland entering the lists this time when Mr. James Bell sent a challenge through the Royal Clyde Yacht Club, naming the cutter *Thistle*. The *Thistle* was designed by George L. Watson. She was a beautiful boat and on more advanced lines than the *Genesta* or *Galatea*. Burgess was again called upon to design a defender and turned out the *Volunteer*, which won both races without any difficulty.

The Herreshoff Defenders

After the *Volunteer-Thistle* race, the New York Yacht Club asked George L. Schuyler to draw up a new deed of gift for the Cup, to clear up certain points in dispute. This was done in October, 1887. The new deed was more complicated than the previous ones; among other changes it required that the challenger should give ten months' notice of intention to challenge, giving at that time the name of the challenging yacht, her rig, and general dimensions. Still, it was six years before another challenge was received. This came from the Earl of Dunraven, naming the cutter *Valkyrie II*.

Four yachts were built to defend the Cup, and in the trial races the *Vigilant* was chosen to defend. *Vigilant* was from designs by Nathanael Herreshoff.

In the first race, October 7th, *Valkyrie* got across the starting line first, but was caught halfway to the mark by *Vigilant*, which was never headed thereafter, and won by 5 minutes and 48 seconds. In the second race her victory was even more decisive. In the next race *Valkyrie* nearly justified her trip across the Atlantic. Half a gale was blowing that day and both boats started with mainsails reefed. In the long, hard thrash to windward, *Valkyrie* worked out nearly a two-



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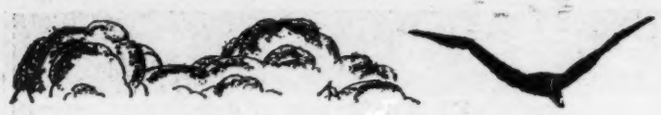

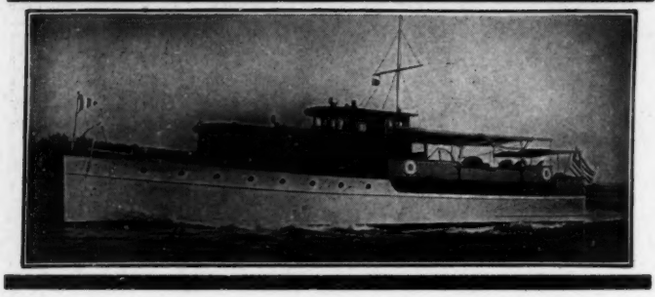

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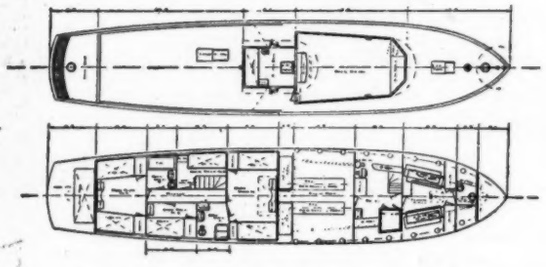

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minute lead. On rounding the mark she set her spinnaker and in doing so tore it a little. In the heavy breeze it soon went into ribbons. Another one was sent aloft, but the fabric was too light and it soon went to pieces. Still another smaller one was set, and held. On the *Vigilant* they sent up a spinnaker in stops, broke it out, and by shaking the reef out of the mainsail she managed to overhaul the Britisher near the finish line, crossed ahead of her, and won the race by 40 seconds corrected time. It was the closest race yet sailed for the Cup.

Two years later the Earl of Dunraven challenged again with the *Valkyrie III*, 89 feet on the water line. The New York Yacht Club went to Herreshoff again and he turned out the *Defender*.

The American boat won the first race, leading nearly all the way, corrected time showing her 8 minutes 49 seconds ahead. After this race Lord Dunraven complained that the *Defender* had had ballast put aboard after she had been measured, and asked to have her remeasured. This was done on both boats, no material difference being found in either case.

At the start of the second race *Valkyrie III* fouled the *Defender* in trying to avoid a collision when the latter had the right of way, her main boom sweeping the *Defender's* deck, snapping her topmast backstay and cracking the topmast. Without stopping to ascertain the damage she had done, *Valkyrie* kept on her course. In her crippled condition, and with a protest flag flying, the *Defender* followed her over the course, finishing 2 minutes 18 seconds behind the British yacht on actual time. The hearing on the protest resulted in disqualifying *Valkyrie*.

This did not please Dunraven, who also complained about the crowding of the excursion fleet during the last race. So at the start of the third race there was considerable tension in the air. When the starting gun banged *Defender* went over the line. She was followed by *Valkyrie;* but after crossing the latter immediately hauled on the wind and headed back for her anchorage. Then it dawned on all present that Lord Dunraven had quit.

Defender sailed over the course, and as she neared the finish line she hailed the committee boat and asked if she should cross the line. The answer was "yes," so the white sloop sailed past the committee boat, her time was taken, and the series of 1895 was over. Lord Dunraven later preferred charges that the ballast of the *Defender* was tampered with during the races.

Lord Dunraven failed to prove his charge. His case was based largely on the appearance of *Defender* in the first race, when, to his eye, it seemed that she was deeper than when she was measured.

Lipton Challenges

The effect of this race was that there was no other challenge for four years, or until Sir Thomas Lipton made a bid for the Cup in 1899, naming the Fife-designed cutter *Shamrock*. This was the first of Sir Thomas Lipton's many attempts to "lift" the Cup.

In the race of 1899 *Shamrock* met the Herreshoff designed *Columbia*, sailed by "Charlie" Barr, who was to become famous as a racing skipper through his handling of America's Cup yachts. The *Columbia* was a fine boat, one of the best Herreshoff ever turned out, and she beat the *Shamrock* in three straight races. In the second race, when the two boats were having a great fight for the lead on the windward leg, *Shamrock's* club topsail collapsed and she was forced to withdraw.

Two years later Sir Thomas came back with *Shamrock II*. *Columbia* was again the defending boat. Although a new defender, *Constitution*, was built by Herreshoff for the honor, she did poorly in the trial races. *Columbia* won in three straight races, but they were all very close, the series being the closest, as a whole, of

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Dear Mr. Banfield:-

To say that the BANFIELD has created a sensation here is putting it mildly, as Mr. Faust who handled the details of purchase for me may have told you, it stopped traffic at the first port we put into. It so happened that this was the first BANFIELD Runabout seen there and when Mr. Faust went ashore to scout for gas he was the target of innumerable questions about it; not only the old salts and captains of private yachts to be found on every pier head up here wanted to know about her but a woman in a Lincoln limousine had her chauffeur stop her car in order that she might ask questions about it.

To me personally the boat is a revelation. It has been out every day in every sort of weather -- mostly bad. Yesterday, for instance I left Provincetown at a little after two o'clock for a thirty mile run across open water. At a little after three what this morning's papers report as the worst electrical storm that has hit that spot in years, was experienced; the wind was very high, one newspaper account refers to it as a tempest. I was in the midst of this storm off shore, steering to the compass, when it struck and I can assure you it was wild. I wouldn't have given a nickel for my chances of weathering what the BANFIELD went through in any other type of runabout I have ever ridden in. It was the nastiest sort of a sea, my three passengers were scared stiff but through it all the BANFIELD went along like the sea boat it is.

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any that has been sailed, *Columbia* winning by 1 minute 20 seconds in the first race, 3 minutes and 35 seconds in the second and 41 seconds in the third. At many stages of the races *Shamrock II* was leading.

In 1903, Sir Thomas tried once more with a new *Shamrock*, number three, and was opposed by the *Reliance*, the latest and most extreme Herreshoff creation, carrying 16,160 square feet of sail, or 2,000 more than *Shamrock III*. *Reliance* had to allow the English boat 1 minute and 57 seconds time. In the Cup series, "Charlie" Barr sailed the *Reliance*, and Captain Bevis the *Shamrock III*, the former winning all three, the first one by a margin of 7 minutes and 3 seconds, the second by 1 minute and 19 seconds, while in the third *Shamrock III* missed the finish line in a thick fog that had settled down, and when she finally found it did not cross, as the race was then over.

This was the last match for the Cup we were to see for seventeen years, and then it was Sir Thomas Lipton who was again the challenger. After the *Reliance-Shamrock III* race the New York Yacht Club changed its measurement rule, and gradually the other yachting centers followed the lead of the older organization. The old water line-sail area rule which had been in force here for many years had been producing boats of an extreme type with flat underbodies and very long ends. *Reliance* herself was extreme in these particulars, and it was felt that the limit to which form and construction could be sacrificed to speed had been reached. So the present Universal Rule was formulated, looking towards the production of a saner, more wholesome type of hull. With some modifications, the new rule has stood until the present, and the next defender, *Resolute*, was built under it. But she was also a very lightly built craft, and in 1929 the New York Club Yacht adopted scantling restrictions in conformity with those used abroad under the International Measurement Rule, and we were at last to see strong, well-built hulls once more instead of mere racing shells.

In 1913 Sir Thomas challenged through the Royal Ulster Yacht Club for a race in 1914, naming a 75-foot water line challenger, *Shamrock IV*. This boat was on her way here when the World War broke out, and with our two remaining Cup candidates was laid up until 1920.

To meet this challenge we built three yachts, *Resolute*, designed by Herreshoff; *Vanitie*, a Gardner creation, and *Defiance*, turned out by George Owen. The latter proved a failure. *Resolute* was chosen to defend.

This series is still so fresh in the minds of yachtsmen that it need not be described in detail. *Shamrock IV* did not conform in type to our rule, although she was measured under it, but she came nearer to winning the Cup than any other challenger. The races were sailed in July and *Shamrock IV* took the first two. During the first race *Resolute's* throat halliards parted when she had a five-minute lead, letting the mainsail down, so that it could not be repaired, and *Shamrock IV* took the race as *Resolute* withdrew, the first time in the history of the Cup that one of our yachts had failed to finish.

In the second race *Shamrock*, while in the lead after several hours of sailing in light, variable winds, got the first of a shift of wind and romped off with the race to win by 2 minutes 26 seconds corrected time.

With two races to none for *Resolute*, it looked as if the Cup was due for a ride, but *Resolute* took the next three races by the following corrected time: 7 minutes 1 second, 9 minutes 58 seconds, and 19 minutes 45 seconds. This brought the series to a close.

After waiting until 1929 Sir Thomas again asked for a race this year. So he is thus making his fifth attempt to capture the historic Cup. In the thirty-five years since Lord Dunraven's challenge of 1895, no one but the Irish baronet has challenged.

Ritchie Announces the Director Automatic Steering Compass

E. S. Ritchie & Sons, 112 Cypress St., Brookline, Mass., have just announced the placing on the market of their new Director Steering Compass. The Director is an automatic steering device in which a magnetic compass controls the steering mechanism of a vessel, and is said to steer a boat better than she can be steered by hand. It consists of a U. S. Navy Standard No. 1 Illuminated

The new Director Automatic Steering Compass, which is said to be simple, accurate, and inexpensive

Compass, supplied with a simple attachment whereby the changing indications of the compass control an electric circuit without detriment to the action of the compass. It thus controls a small electrical steering engine which is adapted to operate the steering mechanism of the vessel. The steering engine may be instantly disconnected to allow hand steering. Also, the hand wheel may be turned against the engine in an emergency. The rudder response to the compass may be instantly adjusted to fit all sea conditions ranging from a calm to a severe following sea.

The Director is said to be simple, reliable, accurate and inexpensive. It relieves the helmsman of arduous labor at the wheel and leaves him free to keep an undistracted lookout ahead, an added factor of safety in fog and darkness. It may be installed on power vessels or auxiliary sailing craft.

C. Z. Kroh Moves to New Quarters

The C. Z. Kroh Manufacturing Company, who are perhaps the best known manufacturers of boat tops, cushions and pillows for all classes of yachts and who have been located for many years at 1916 Linwood Avenue, have moved to a new location at 108–112 East Woodruff Avenue, Toledo, Ohio.

A New Boston Brokerage Firm

A new yacht brokerage service, The Boston Yacht Sales, Inc., has been started in Boston, at 126 State Street, by Ashley D. Adams, formerly connected with the Noyes Marine Company and the brokerage department of Eldredge-McInnis, Inc.

The new firm will specialize in commuting and cruising craft and plans to take on the New England distributorship for a line of stock cruisers soon to be announced.

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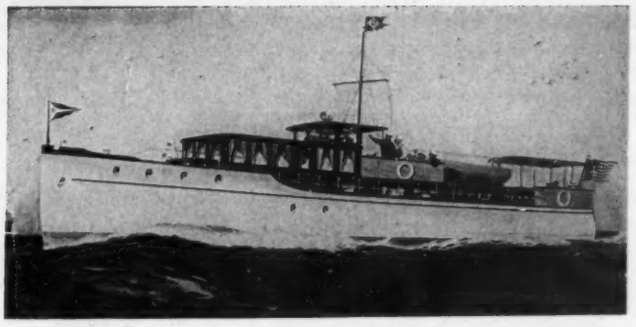

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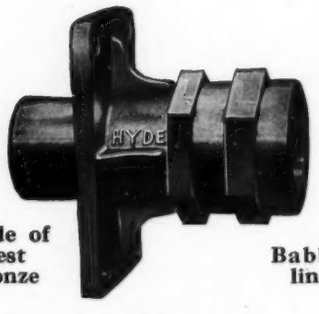

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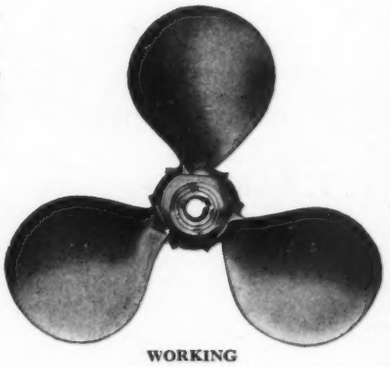

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Curtis, Layle & Company, with headquarters in the Curtis Building, Detroit, announce that they have taken over distribution in Michigan for the International Fire Equipment Corporation of New York. The International Fire Equipment Corporation is well known as one of the largest manufacturers of automatic fire prevention systems of the smothering type, and the complete line, including equipment for homes, offices, industrial plants, automobiles, motor boats, yachts, passenger vessels and freighters will be represented by the Curtis, Layle organization.

"Surprise" is a 28-footer designed especially for Gulf Coast fishing. Powered with Universal Motors

"Surprise," a Handy Fishing Boat

Designed particularly for Gulf Coast fishing and nosing in and around shoal spots the snappy little *Surprise*, whose photograph is reproduced herewith, is a craft which has aroused the interest of many visitors to Florida. She is a 28-footer, designed by the Matthews Co., of Camden, Maine, and with her 18-inch draft can negotiate the shallow water on the feeding grounds with great ease. She is powered with a pair of Universal Six-75 direct drive marine motors, with which she can knock out 21 miles an hour, and "handles on a dime."

Deep-sea fishing is the particular province of "Bala," a 32-foot Banfield owned by Charles W. Lanser, of Philadelphia. A 200 h.p. Model 202 Scripps furnishes power

Tribute to McInnes Green Composition

Mr. Carl L. Weagant, who recently returned to the United States after cruising 6000 miles in the 46-foot ketch *Carlsark*, states that McInnes Green Composition, which was applied to the vessel's bottom in Quebec before the start of the trip and again at Cannes, France, gave the utmost satisfaction. This composition, which is manufactured by the Pettit Paint Company, Inc., of 45–47 Cornelius Avenue, Jersey City, N. J., has been in use for nearly seventy years. Yachtsmen in general agree that it is one of the best anti-fouling paints made.

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"Barbasol plays a quick, clean shaving part"

. . . no retakes; no old brush-and-lather 'props'

"I like Barbasol because of its wonderful quick, easy shave, without using any of the old 'props'. No brush; no rub; no lather; no fuss. . . . And how clean and velvety it leaves the face! No scratching, scraping or digging — never a 'retake'. For the fast-steppers; the man in a hurry; the fellow who's going to GET somewhere — and wants to LOOK the part — I recommend Barbasol."

RALPH GRAVES

*Barbasol testimonials are not paid for

RALPH GRAVES, new luminary of the screen world, who thrilled millions in "Submarine" and "Flight," is now starred with Jack Holt in "Hell's Island."

TRY this today and find out why Barbasol Believers have made it the fastest selling shaving cream in the world.

Just follow these directions and you'll follow the crowd:

1. Wet the face thoroughly. Leave it wet . . . **2.** Spread on Barbasol. Don't rub it in . . . **3.** Wet a good blade and — SHAVE.

You'll hardly believe the old shaving chore can be as simple as this till YOU try it. Barbasol makes all beards behave. Tough beards, wiry beards and the beards that grow on tender faces — all are softened instantly; come off quick; with a crisp ease that leaves the face refreshed. And there's no brush, no rub, no lather.

This new, different, modern shaving cream makes men so enthusiastic that Barbasol gets a fan mail like a matinee idol. Here's one: "A pleasure and a delight . . . saves time; leaves my face 'happy', " B.C., Jr., Texas. And another: "Would not go back to the old lathering after using Barbasol," W. D., Georgia. And another: "A cool, smooth shave . . . the perfect shaving cream," E. R. L., Pennsylvania. They must MEAN it; hundreds of letters like this pour in all the time, *unsolicited*.

Now YOU try it. When you discover that Barbasol is meant for YOUR face, too, you'll end the daily shaving *scrape* forever — and make it a daily *delight!* Generous tubes 35c and 65c at all druggists. The Barbasol Company, Indianapolis, Indiana.

BARBASOL SKIN FRESHENER

When you need a "bracer," morning, noon or night, try this — slap Barbasol Skin Freshener on face and neck. It rejuvenates, tingles. Man, what a pick-up!

Barbasol

For Modern Shaving

NO BRUSHING — NO LATHERING — NO RUBBING